

Journal of
COLLEGE PLACEMENT

THE INTERNATIONAL MAGAZINE OF PLACEMENT AND RECRUITMENT



WE'RE IN THIS TOGETHER — DR. E. N. JONES
POTENTIAL — FROM WITHIN! — ALAN MACGREGOR
A FORUM ON THE ETHICS OF PLACEMENT AND RECRUITMENT
THE ANNUAL DIRECTORY OF FIRMS RECRUITING IN 1956-57

December, 1956

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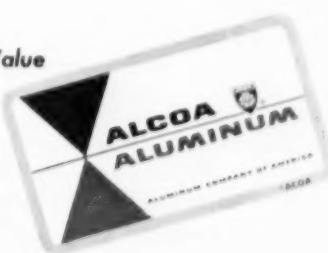
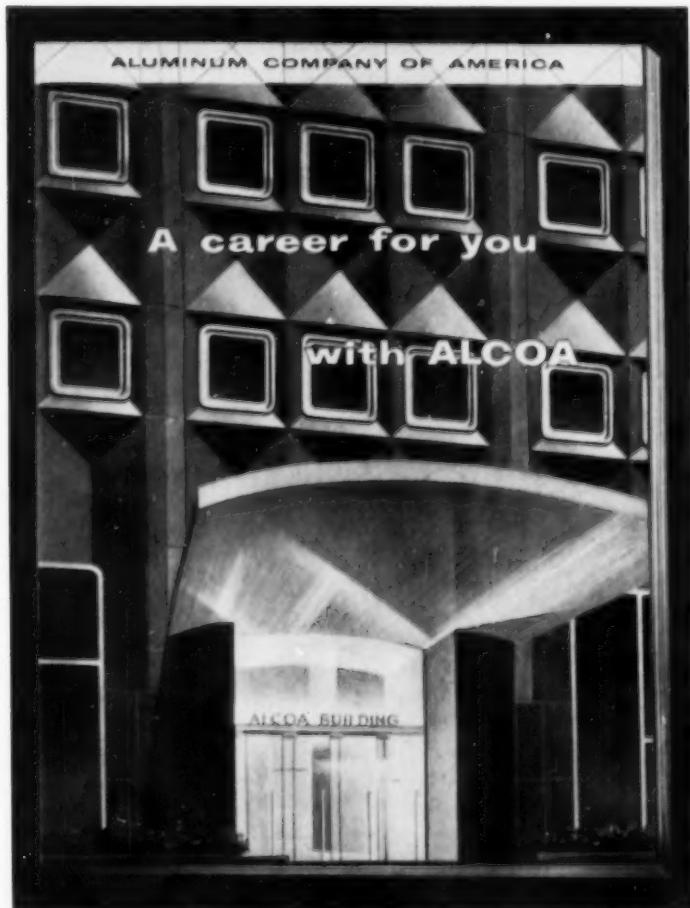
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ALLEN J. CLAY joined General Electric in 1946 after receiving a B.E.E. from the University of Virginia in 1945. A naval officer during World War II, Clay managed the Charlottesville, Virginia, office from 1950 to 1955.



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Journal of COLLEGE PLACEMENT

VOLUME XVII

DECEMBER, 1956

NUMBER 2

CONTENTS

A Code of Ethics — Everett A. Teal	7
Promotion from Within — Alan MacGregor	14
Pharmacology as a Career	17
Our Ethics — a JOURNAL Forum	18
The New C.P.P. Job Directory	21
Keeping Up with the Joneses — H. Paul Abbott	27
E.T.S. — A Service and a Career — Margaret Nevin	28
Portrait of a Founder	30
What is Placement Worth? — John E. Steele	37
How Business Graduates Feel About their Jobs — Carl Dickinson	43
Future College Enrollments	52
Supplementary List of Placement Offices	71
Listing of Recruiting Companies	105

COLLEGE PLACEMENT

THE INTERREGIONAL ASSOCIATION OF PLACEMENT AND RECRUITMENT



Photo by W. M. Morris

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JOURNAL FEATURES

Letters	10
Placement and Recruitment News	33
With the Regional Associations	34
Officers of the College Placement Publications Council, Inc.	147
Officers of the Regional Associations	148

THE COLLEGE PLACEMENT PUBLICATIONS COUNCIL

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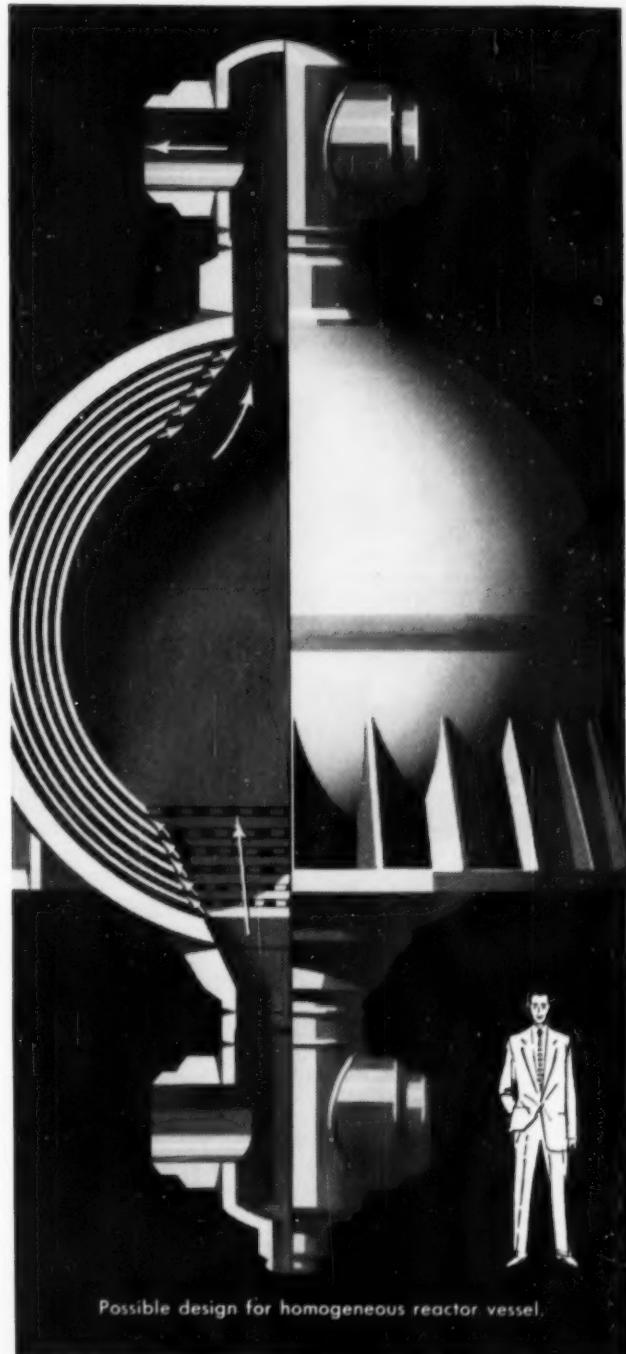


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Now El Capitan is more than ever something special in rail transportation. In midsummer an entirely new El Capitan took to the rails. The feature you instantly notice that sets it apart from other trains is the height of the cars which are built with two levels, the roof rising 15 feet 6½ inches above the

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Passengers ride "upstairs," on the upper level of the chair cars, the lower level providing space for lounges and luggage. Equipment is installed over the trucks at the normal floor height.

The diner is built on the same plan, with meals served to passengers on the upper deck. But El Capitan's strongest magnet is the high-level lounge car, where the traveler can feast his eyes on some of the most exciting scenery in

America as the train sweeps through mountains and deserts of the Southwest.

The Bethlehem wrought-steel wheels and forged-steel axles that are carrying many of the new El Capitan cars on their 39½-hour journeys between the Midwest and Pacific Coast were made at Bethlehem Steel's plant at Johnstown, Pa. From there the Bethlehem wheels and axles were shipped to the Philadelphia plant of the Budd Company, where these pace-setting cars for the new El Capitan were built.

BETHLEHEM STEEL



A Code of Ethics - - *practical considerations*

Do current excesses in placement and recruitment stem from intention or ignorance? Regional associations already are deciding the answers they may give to this question.

A code of ethics for placement and recruitment has been a principal topic of discussion at all of the regional meetings this fall.

It will come as no surprise to those closely associated with the field that this has been the case. Responsible recruiters and placement officers alike are jealous of the degree of professional reputation which has been attained. Its present level has been too hard-earned to be jeopardized by the thoughtless, precipitate, or selfish tactics of a few.

Colleges cannot condone departures from the moral teachings of their own classrooms. Charged with the training of the young, they must be beyond suspicion. Those who deal with them would do well to conduct themselves in the same manner.

On page 18 of this issue is presented a JOURNAL forum illustrating some of the thinking of the regional associations on the matter of ethics. From many contributions of this nature must be made the one universal code, for a collection of eight separate codes would be as unwieldy as it would be unpractical. Indeed, the cementing of relations among the eight associations in the endorsement by each of the Council's constitution could well lead to the first common stand on the matter of ethics.

Is a code really needed? Annually we are seeing an increase in placement services and in recruiting. At the same time, the change of personnel in our own field is notable. A better understanding of problems, responsibilities, and customs would be an accomplishment in itself. A guide which would lead to this understanding on the part of students, placement directors, and recruiters would eliminate much of the present confusion and ill will.

Should there be specific penalties? A code of ethics, by the name alone, carries with it the obligation of moral principle. By and large, individuals will adjust to the mores of that bracket of society in which they operate if they know what is expected of them. Those who do not adjust will soon be educated by social pressure. It has been well said that the uniform of the policeman is more influential than the man who wears it.

Under the pressure of intense competition with which we seem destined to live for some time, there is always the temptation for some to "let the ethics fall where they may." This is in sharp contrast with an older and wiser saying, "Do unto others as you would have others do unto you." Until all men can appreciate and act upon the universal value of the second, a code of ethics would seem to be the only answer.

By

EVERETT A. TEAL

President
College Placement Publications
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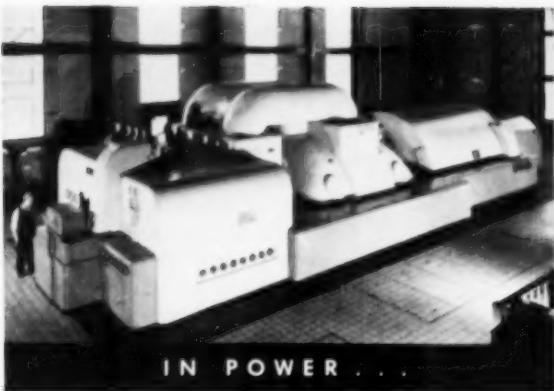
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Index of Advertisers

Allis Chalmers Manufacturing Co.	9
Aluminum Co. of America	1
American Viscose Corp.	119
Anchor Hocking Glass Corp.	71
Arma Div., American Bosch Arma Corp.	45
Atlantic Refining Co.	141
Avion Div., ACF Industries, Inc.	83
Babcock & Wilcox Co.	13
Bell Telephone System	121
Bethlehem Steel Co.	6
Boeing Airplane Co.	101
Boston Insurance Co.	139
Budd Co.	91
Burroughs Corp.	61
College Blue Book	10
Columbia Gas System Service Corp.	113
Combustion Engineering, Inc.	32
Connecticut Mutual Life Insurance Co.	146
Continental Can Co., Inc.	23
Convair (Div. of Gen. Dynamics Corp.)	134
Crane Co.	99
Crucible Steel Co. of America	63
Department of the Army	40
Dow Chemical Co.	127
Dowell, Inc.	117
DuPont Co.	97
Esso Research & Engineering Co.	81
Fidelity Mutual Life Insurance Co.	22
Food Machinery & Chemical Corp.	145
General Electric Co.	2
General Motors Corp.	36
B. F. Goodrich Co.	49
Hughes Aircraft Co.	51
Humble Oil & Refining Co.	12
Industrial Science and Engineering	26
Ingersoll-Rand Co.	115
International Business Machines Corp.	79
International Harvester Co.	129
International Latex Corp.	56
Joy Manufacturing Co.	50
Kansas City Life Insurance Co.	144
Kroger Co.	11
Glenn L. Martin Co.	42
Mass. Mutual Life Insurance Co.	137
McGraw-Hill Publishing Co., Inc.	24
Minneapolis-Honeywell Regulator Co.	4
Minnesota Mining & Manufacturing Co.	107
Monsanto Chemical Co.	58
Mutual and United of Omaha	80
Mutual of New York	20
National Geophysical Co., Inc.	138
New Jersey Zinc Co.	143
New York Life Insurance Co.	4th Cover
North America Companies	123
North American Aviation	69
Owens-Corning Fiberglas Corp.	65
Owens-Illinois Glass Co.	125
Philadelphia Electric Co.	140
Phileco Corp.	39
Philippe Petroleum Co.	75
Pratt & Whitney Aircraft (Div. of United Aircraft Corp.)	95
Proctor & Gamble Co.	55
Radio Corp. of America	87
Reynolds Metals Co.	133
R. J. Reynolds Tobacco Co.	136
Royal-Liverpool Insurance Group	104
Shell Oil Co.	67
Sikorsky Aircraft (Div. of United Aircraft Corp.)	47
Standard Oil Co. of Ohio	73
Sylvania Electric Products	8
Timken Roller Bearing Co.	135
Trans World Airlines	2nd Cover and 142
Travelers Insurance Co.	77
Uarco, Inc.	103
Union Bag-Camp Paper Corp.	85
Union Carbide & Carbon Corp.	131
United States Rubber Co.	108
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LETTERS

Commercial Invasion

Sir:

I feel an obligation to issue a word of warning to all placement officers through the JOURNAL concerning the invasion of our activities by commercial interests to a point which I believe to be a threat to our entire relationship with our graduates.

It is my impression that most of us are so pressed by our responsibilities that we are innocently going along with a number of gimmicks simply because we do not have time to "read the fine print." Before we know it we will find that we have been largely by-passed and the major loss will be to our students, not to ourselves.

If the best solution to the present problems of supply and demand is to have the graduate work out his own placement with the help of independent commercial firms, let us agree upon those tactics immediately and close our offices. If we are to encourage and support by action, or lack of it, intermediary commercial organizations, we are destroying our reason for being. And don't try to tell me that there can be coexistence! Either we as placement officers have the ethical responsibilities to our colleges and our business and industrial associates or we do not.

Those organizations which, in one guise or another, would offer the seniors and alumni a "get rich quick and stay that way" scheme are primarily concerned with one end—their own profit. Any placement officer, harassed though he or she may be, who goes along thoughtlessly with any slick, new scheme on the basis that it may ease his burden and "can't hurt anything" is performing a disservice to our

entire profession. Likewise, any recruitment officer who gives financial support to these commercial projects without investigating what he is doing to his long-term interests will deserve what he gets. The trouble is that he is helping to pull the house down on all of us. I am acquainted with a number of placement officers who feel so strongly about industries patronizing some of these schemes that they are giving them less consideration than those firms which do not. In any opinion this is entirely justified.

Obviously, every commercial organization operating in our field is not of the same stripe but I think it is wise to be suspicious, automatically, of any scheme or organization that wishes to "assist" us in our primary obligation with little or no cost to our offices, students, or alumni.

Before you give any assistance to any kind of profit making enterprise, take the time to read their proposition all the way through. Take the time to consider what that plan is going to do to your relationships today and next year with your seniors, your alumni, and your recruiters. I think you will find, as I have, that we are perilously close to trading our birthright for a mess.

I would appreciate seeing in these columns further comment on this subject.

Samuel H. Beach,
*Director of Placement,
Columbia University*

Recruitment Suggestions

Champaign, Ill.

Sir:

I was much interested in reading the letter from Mr. D. E. Irvin of General Electric Co. in your October issue, regarding

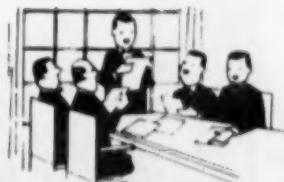
(Continued on page 50)



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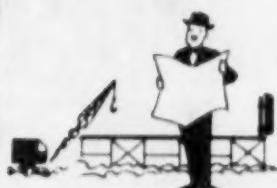
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PE-8

Promotion from Within

A JOURNAL CASE HISTORY

By ALAN MACGREGOR

Administrator of Manpower Planning and Recruitment Services, Marathon Corp.

ANY organization that plans expansion for the immediate future, or is planning long-range development, must do some serious thinking regarding its manpower. College recruitment is at an all time high. Why? Because any future expansion plans which involve new plants, increased production capacity, new techniques of operation, must be accompanied by adequate manpower planning and recruitment.

Milton Mandell in The American Management Association's Research Report #27 states, "The fact that a company has a carefully planned recruitment program is as good a sign of effective management as almost any other single index. The reason for this broad statement is that poor management cannot produce a good recruitment program."

He continues, "Effective recruiting means that there has been a determination as to future

needs; that the kinds of people required have been ascertained, the value of particular recruiting methods for different types of positions has been determined, contacts have been established, material has been prepared; and that the whole process of demand and supply, as well as company policies and management attitudes, is constantly under study."

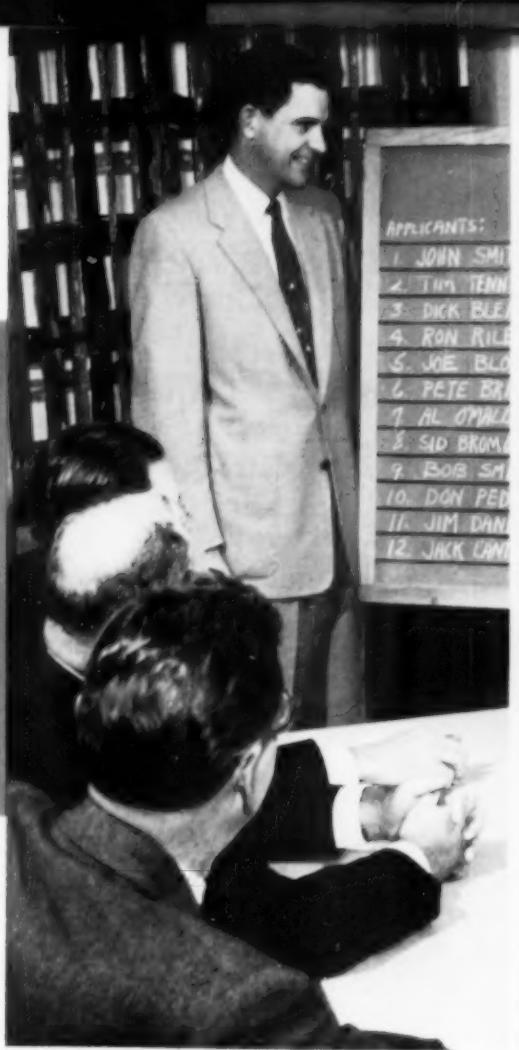
Why do companies recruit? Marathon has boiled the reasons down to three: (1) We actually carry out a policy quite a few companies just talk about. We train and promote from within. We are trying to build an organization of people with potential.

In order to do this, we must find people with potential. We must recruit.

(2) We must perpetuate young blood and new ideas for progress and growth.

(3) We recognize weaknesses of stagnation caused by limited viewpoints—strictly local people with local ideas. To combat stagnation, we hire qualified persons from a variety of geographical areas.

Of course, there are a lot of corollary reasons why we recruit. Frankly, we wish to establish contacts at colleges and universities who will continue throughout the year to refer qualified



	WOLDT	SNYDER	FLAM	DIAM	PEARCE	DEVRIES	SCHULTZ	KORETS	
	16	39	58	93					0
1	6	39	58	93					
2	8	27	14	77					
3	10	12	42	87	84				
4	11	12	16	11	11	12			
5	17	9	52	43	9				
6	8	2	64	95	1				
7	4	9	11	77	16	5			
8	10	7	12	10	51	10	11		
9	22	21	11	22	22				
10	61	55	63	16					
11	13	10	11	3	13	2	10		
12	25	64	42	64	8				

Jim Roberts, personnel representative for marketing, conducts final selection conference with seven sales managers. On the chart, c/f means "consider further;" a/s means "after service" and T/D indicates man is turned down.

applicants to our attention. We believe that if we want the good young fellow with potential, we have to seek him out. And, we believe he is becoming educated, not standing on a street corner waiting for us. Recruiting also creates an increasing awareness among college students and faculty of the employment opportunities in our industry, and particularly at Marathon. Effective recruitment is an integral part of good public relations.

To provide the basis and the objectives upon which Marathon's college recruitment program has been built, it would be



Many firms give lip service to a total program aimed at the recruiting and promoting of personnel "from within" but one, Marathon, has a notable record of achievement. Here is the story of its accomplishment.

A sales candidate talks with a former classmate.



well briefly to identify our organization and the industry of which we are a member.

Marathon is a producer of pulp, paper, and allied products. As such, it is a member of the pulp and paper industry, which is recognized as one of the most rapidly expanding industries on the American scene.

Statistical summaries, for example, place the industry as No. 5 in the nation, based on sales. Research also reveals that the pulp and paper industry plays a major role in the use and generation of power, that it is among the top ranked industries as a payer of corporate dividends, as a corporate income producer, and as to average annual earnings of production workers.

Expansion Planned to 1958

The nation's pulp and paper industry is currently involved in a \$2 billion expansion program that will run through 1958. Production capacity will be appreciably increased. It follows that increased production will lead to an increase in employees.

Marathon is involved with more than pulp and paper, for we are also converters of paper into diverse finished products, such as food packaging for bakery, dairy, frozen food and meat,

and vegetable oil industries; Northern household items including toilet tissues, towels, facial tissue, and napkins; and other forms of packages and packaging materials. Chemical products are also in our product picture.

Being completely integrated, from harvesting of our timberlands to production of final product, we have diverse manpower needs. For example, we must recruit artists for package design; graphic arts technicians for our engraving, ink, and printing operations; engineers for research and development activities; plus employees for other areas.

By way of example, Marathon has 1,000 different salaried positions classified for male and female employees. All do not require recruiting, of course, but the figure does illustrate the scope of placement and personnel responsibility which relies to great extent on the recruiting program.

In 1944 and early 1945, as part of a general program to meet present and anticipated employment needs, the General Training Program was formulated. It was decided that recruitment for this program would be centralized at our Menasha, Wisc., headquarters office.

Key to any recruiting program is the effectiveness of the recruiter when visiting the placement office. Here a Marathon interviewer conducts a typical campus interview. The company finds value in having one contact with students rather than separate interviewers for each job classification.



We needed to become better known. Contrary to those who recognize at a glance the names of Proctor and Gamble, RCA, Armstrong Cork, Ford, and a host of others, not many persons were aware of using a number of Marathon's products daily. As one of our founders, D. C. Everest, stated: "People will give up the eating habit last." This reference related to Marathon's part of producing the packaging for a major portion of foods and pointed up the company's stability. Centralized recruitment enabled us to set up a uniform, coordinated effort even though our personnel requirements ranged from highly technical men to non-specialized liberal arts men.

One Contact Found Advisable

I believe it also helped at college placement offices to have one contact with our company for recruiting men, instead of separate interviewers such as Mr. X looking for accountants, Mr. Y for engineers, and Mr. Z for production men for a local plant near the particular college. Other companies find localized or decentralized recruiting, or a combination of both, more effective for them. But this decision is one which each company must make, weighing the factors that are most important to it.

Of further advantage for us, centralized recruitment simplified the problem of obtaining information needed to determine Marathon's over-all manpower requirements.

Every company budgets its expenses, its sales, its overhead—but not all companies budget people. I'm not original when I say that "people are our most important asset." Andrew Carnegie once said, "Take away all my plants, all my machines, but leave me my trained staff and I'll replace the plants and machines within five years."

We, therefore, try to make an
(continued on page 90)



PHARMACOLOGY as a CAREER

The demands of pharmacology are as great as its practice is rewarding. Not to be confused with pharmacy, it is closely associated with medical practice and is the ideal pursuit for those interested in making a real contribution to the medical sciences.

WHAT shall I suggest to an intelligent young man who is interested in making a real contribution to the medical sciences and doesn't want to be a physician or surgeon?" a counselor asked recently.

There are many answers to this question, but one which is given too seldom is pharmacology. An informal survey of both laymen and trained counselors revealed the fact that too many believe it to be synonymous with *pharmacy*. Without the pharmacologist, the pharmacist would still be selling sulphur and molasses!

Pharmacology is that branch of science having to do with the effect of chemicals and drugs on animals. When man is the animal in question, it is referred to as clinical pharmacology.

Pharmacology is thus a branch of the medical sciences which is extremely important from the point of view of the practice of medicine — and more important still in the development of new drugs.

A pharmacologist has to call on more skills than does any other scientist. He has to have a very thorough knowledge of comparative anatomy and physiology. He needs to be an accomplished biochemist and is always in close contact with physical chemistry and colloid chemistry. Frequently he is measuring rather small effects and can only be sure of his results when his data are treated statistically. A rather thorough acquaintance with statistics and statistical methods is therefore essential. Those who have to develop new equipment should have a good knowledge of electronics. A good grounding in microbiology is essential. The backbone of the science, how-

ever, consists of anatomy, physiology, and biochemistry.

An undergraduate heading in the direction of pharmacology should take mathematics through calculus, all the anatomy and physiology courses available, and organic, analytical, and physical chemistry (biochemistry if available). With a thorough grounding in these undergraduate disciplines he is qualified to work as an assistant to a trained pharmacologist or to start the study of pharmacology itself in a graduate school, preferably one which has very close connections with a medical school.

Quite a large percentage of the outstanding pharmacologists have an M.D. as well as a Ph.D. in pharmacology, because pharmacology is so closely connected with the practice of medicine. After a student has a Ph.D. in pharmacology, he is ready to begin. This is not a static subject, it is dynamic. One has

(Continued on page 66)

Among the many sessions devoted to the matter of ethics by the regional placement associations and available to the JOURNAL for this issue, those of the Eastern College Personnel Officers and of the Midwest College Placement Association are notable. In the following columns are presented the ECPO discussions and the proposed revised code of ethics approved in October by the MCPA.

ECPO Employers' Meeting on Recruiting Ethics

By PHILIP H. YOST
Connecticut General Life Insurance Company

The employers' session dealing with this topic turned into a very lively, spirited debate with widespread participation. We did not attempt a piecemeal, point-by-point delineation of what constitutes good or bad practices, commendable or abusive tactics, sound or unsound ethics, except as a means of arriving at possible conclusions, or to illustrate specific problems. We tried to concern ourselves with the broad fundamental principles by which we believed our common activity should be guided towards a mutually satisfactory "modus operandi", under which each of us could profit and attain our individual objectives, while recognizing and respecting the rights and responsibilities of the other.

We are not here concerned with whether the long list of undesirable practices enumerated in our previous sessions are fact or fancy; or whether they are widely indulged in by many, or purely isolated instances. That there is a problem which we feel must be squarely faced and dealt with, I think we are all willing to agree.

But before we can cope with this problem, I think we in industry feel that certain attitudes must be established if we are to

OUR ETHICS

— *a Journal Forum*



come of age and grapple with this problem in an objective and constructive manner.

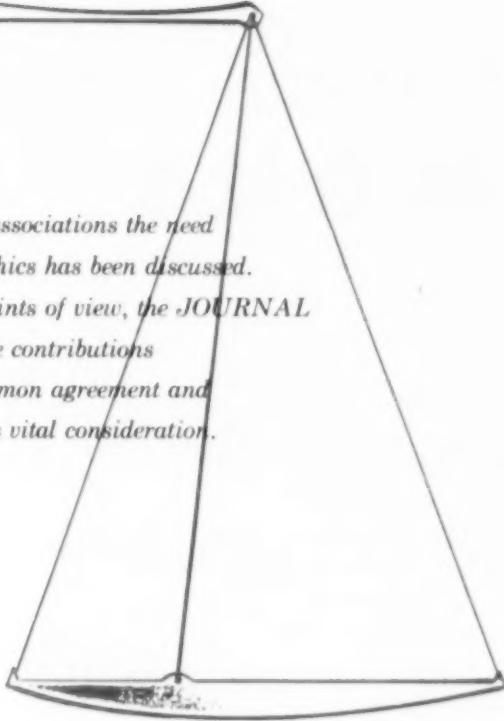
We are basically agreed that the common objective of all of us — placement official and recruiter alike — is and must continue to be — to establish and maintain a service that is designed to be of maximum benefit to the student in assisting him in the realization of his career objectives, through the maximum utilization of his native abilities and acquired skills, both vocationally and in terms of social usefulness. Only by faithful adherence to this basic principle can we continue to be re-

compensed through the achievement of our individual, perhaps less altruistic, purposes.

We have detected in some quarters what we believe to be an unjustifiable attitude, bordering somewhat on the smug and "holier-than-thou" amid the welter of criticism directed at the employer by some of our college friends. Their approach would place the whole blame for the present situation on the doorstep of the employer.

We would remind these people that while we whole-heartedly agree that the relationship of the recruiter to the campus is that of a guest enjoying the

In all of the regional associations the need for a revised code of ethics has been discussed. From among many points of view, the JOURNAL presents several notable contributions as a guide toward common agreement and implementation in this vital consideration.



hospitality of the college, and therefore he is constrained, as a matter of good taste, to conduct himself in a manner becoming a guest; nevertheless, he has in the past been an eagerly sought guest, frequently implored and importuned to accept this hospitality, and perhaps encouraged to believe that he was pretty important. And many of the practices resorted to by employers to fulfill their organizations' objectives have been forced upon them by the inadequacies of many college placement offices.

At the same time that placement people have achieved a very fine result in developing

a wider market for their product — perhaps thereby even intensifying the very competition which is the root of our problem today — many have not yet achieved in terms of quality the level of service they profess to render; nor, in many instances, have they successfully sold the value of their service to their own administrators, and thereby assured themselves of being able to provide adequate facilities to cope with the pressure situation they have helped to create.

The wheel has turned full cycle, because of the tremendous expansion of business and industry in the past ten years re-

quiring an infinitely larger number of competent people to assume top levels of responsibility; and because of the tremendously short supply of such people, brought about by the abnormally low birth rate of the thirties, and the permanent loss to the total work force in World War II of a sizable number of potentially competent leaders; to the point where the normal laws of supply and demand as related to manpower appear no longer to be operative.

We must remind ourselves that no matter how far in either direction the pendulum may swing, the fundamental client-customer relationship will still exist; and that particularly in such times mutual forbearance and restraint, understanding and good will need to be exercised to the utmost by all concerned, if we are to arrive at our common objective of establishing and maintaining what must be primarily a *service for the benefit of the student*.

We would remind our colleague in business and industry that his status as a guest does not entitle him to rights and privileges in the eyes of his host, simply because he's pretty prominent in his own community, or purely by reason of his pre-eminence in a totally unrelated field. He must earn the right to continue to enjoy the fruits of the service offered, by unreservedly and sincerely committing himself to the furtherance of the common objective; and by accepting his obligations and responsibilities to carry out that service for the present benefit and future welfare of the student.

We expressly remind the recruiter at this point of this term "the future welfare of the student", because we thoroughly believe that just as the child's early learning is largely by imitation of what he sees around him, so the character of many of our future business and industry leaders may well be determined

(Continued on page 98)

A Career with **M O N Y**

Opportunities available in...

- Home office management in administration, electronics, investment, underwriting, planning and methods
- Actuarial
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Mutual Of New York . . . "First in America" . . . offers excellent training and career opportunities for men and women in both home office and field work. Mutual Of New York issued its first policy in 1843, marking the first time an American company has offered *mutual* life insurance to the general public. MONY was the first company to issue life insurance to women . . . to create an endowment policy . . . to declare annual dividends . . . and many other "firsts" in the life insurance business.

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Vice President of personnel.*

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MONY TODAY MEANS MONEY TOMORROW!

Announcing—



THE NEW C. P. P. JOB DIRECTORY

THE annual publication that will make available business and industry's recruitment message to the college and university students of the United States and Canada is now under production by JOURNAL OF COLLEGE PLACEMENT editors.

A project of the College Placement Publications Council (see page 96), the only international body representing the eight regional placement associations, the new job directory will fill the need of college men and women for a publication supplying data on all major business and industrial firms recruiting in member institutions located in the two countries.

More important, the publication, to be titled "Your Future", is being initiated by placement officers, and supervised by placement officers. The final product

Produced by and for the placement offices themselves, this new non-profit directory will be unique in listing all of the firms who are recruiting at American and Canadian colleges. It is being prepared now for distribution in 1957 by the Council.

will be distributed through placement offices on a voluntary basis.

The unique contribution of the new job directory will be its providing of information to seniors on a functional basis. In it will be industrial and business "profiles" on the thousands of firms which recruit in the member colleges of the eight associations. This is more than the brief listing found on page 105 of this issue. It will be a complete capsule on each firm resembling the well-recognized industrial recruitment forms adopted by the Midwest College Placement Association.

These listings will be provided free to all firms listed by the regional associations. Each placement office is being polled as to its list of recruiting firms and the regional representatives to the Council are collating the lists, removing duplications and firms whose activities are too localized to be of value.

The lists are then forwarded to the JOURNAL offices where further collating will be carried out and the master lists prepared. From these, questionnaires will be circulated to the listed businesses and industries.

In addition to the free listings,

CAREER OPPORTUNITY

Offering:

• Independence & Security

In business for yourself, securely backed by proven leadership and guidance.

• High Income

Early prospects of five-figure income. Unlimited growth opportunity in steadily expanding market.

• Prestige

Self-sufficient businessman contributing vital professional service to the community.

• Choose Your Location

70 agencies throughout the country offer wide choice of where to work and live.

Extensive training in sales procedures and technique will be given those who qualify. We are looking for men with ambition and drive to build a professional career in the field of life insurance sales and management.

Write for information about the business, the company and the job.



THE FIDELITY MUTUAL
LIFE INSURANCE COMPANY

THE PARKWAY AT FAIRMOUNT AVENUE
PHILADELPHIA, PENNSYLVANIA

the same firms will be given the opportunity of inserting advertising in the publication on a limited basis. As it is the intent of the Council to include only 100 pages of paid display advertising, listees will be given the opportunity of contracting for a 7" x 10" (minimum size) page and at the same time indicating their interest in a two-page spread. Thus, if the entire quota of 100 pages is immediately taken by single-page advertising, no two-page spreads will be available. Should the total advertising fall short of the 100-page mark, however, those requesting two-page spreads will be granted the remaining pages on a priority basis determined by the date of receipt of their contract. *Free listings will not be contingent upon paid advertising.*

Following the "profiles" of the firms will be a geographical and an occupational index so that seniors will be able to determine where and with what companies they can find opportunities in their chosen field of specialization. Finally there will be chosen articles of specific value to seniors in preparing for their interviews. This material will be of particular value in instances where limited placement counseling is available. The quality of the articles will be such, however, as to provide valuable guidance to any young man or woman, regardless of institution.

The new publication, then, will be made available to any placement office requesting copies for those members of its senior class who are expected to be available for placement. Placement directors are specifically being asked to order no copies for those planning advanced studies or already committed to family or to other obligations and therefore not available for placement. The directories will be circulated by the placement office at a time chosen by the director but in advance of the

recruiting period so that they may serve as a source book for study and orientation before recruiters arrive. Distribution from the publishing offices to the placement offices will be accomplished in September, 1957.

Job opportunities will in no instance be limited to men or to special interest groups such as engineers, even though it is recognized that the greatest demand exists in this field. Being a publication for all college placement, YOUR FUTURE will represent, insofar as space permits, a broad cross section of offerings for both young men and young women.

Only when all lists have been assembled and final orders received from the several placement offices will it be possible to provide estimates as to the circulation of the publication. Preliminary studies made thus far suggest that the circulation will be in the range of one hundred thousand copies to the placement offices of member associations. Copies will be offered also to placement directors (or those serving the placement function) at institutions not holding membership in any of the regional placement associations. In this sense, YOUR FUTURE will be serving a pioneering function in assisting many institutions whose placement operations have yet to be formalized. Canadian as well as American institutions will be served.

It should, perhaps, be stressed that the distribution of the publication will be controlled by the number of seniors to whom it will have real value as determined by the placement director. This gives a selective quality to its function insofar as business and industry are concerned and keeps the placement director from being burdened by the automatic receipt of a vast number of copies — a policy which would give large but completely misleading totals to the advertisers.

Opportunities for college graduates

in

Tailor-Made Packaging

Virtually every U.S. industry is dependent on packaging. Continental Can Company's diversified list of products makes it a leader in the field and one of the 50 largest corporations. Established in 1905, Continental has more than 33,000 employees. We endeavor to make full use of the talents of the college graduates we welcome each year.



Continental Can has 82 plants in the U.S., Canada and Cuba, plus 17 field research laboratories and 66 sales offices.



Positions for technical graduates:

Manufacturing; equipment design and development; research and development; production engineering; production control; quality control; industrial engineering; equipment manufacturing. Previous experience desirable for Technical training programs.

Non-technical graduates:

Sales; accounting; credit; industrial relations; purchasing; production control; quality control; production (manufacturing).

Method of training:

In most departments an intensive, time-scheduled program of up to two years is followed. In others, graduates receive initial training for a particular job opening. Objective: to develop future supervisors and managers. It is desirable for the applicant to be willing to relocate.

Location of principal offices:

Head office, New York. Metal Division, New York, Chicago, San Francisco. Fibre Drum Division, Van Wert, O.; Paper Container Division, Newark, N.J.; Bond Crown & Cork Division, Wilmington, Del.; Shellmar-Betner Division, Mt. Vernon, O.; Research and Engineering Divisions, Chicago; Paper Manufacturing Division, Hopewell, Va.

Raymond L. Rawls, Director of College Relations

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This could be YOU-near

ACTUALLY, it's "Andy" Ashburn, Managing Editor of *American Machinist*. Andy holds a B.S.E. from the University of Michigan, and progressed with his magazine from Assistant Editor to Associate Special Projects Editor to Managing Editor since joining McGraw-Hill Publishing Company. Like most of the 485 full-time editors on the McGraw-Hill "team", Andy is an engineer *first*—a writer second. And unlike most engineering graduates his age, Andy is already near the top of his chosen field.

Ask him what he thinks about a writing career for engineers and he'll tell you this: "All through college, I was a staff member of *The Michigan Technic*, and editor as a senior. And I've never stopped being grateful for the decision I made to be an engineer-writer. I've learned more about what's going on . . . kept in touch with key developments in engineering throughout industry . . . thanks to that decision."

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have a guarantee against boredom and stagnation—and a stimulating, rewarding career in your chosen field of engineering.

If you are the right man—both an engineer and an alert, inquisitive knowledgeable man who likes to report, appraise and write, we want to talk with you about career opportunities as an engineering editor with McGraw-Hill. Get the story of McGraw-Hill and what it has to offer you today—by writing for your free copy of "Successful Careers in Publishing At McGraw-Hill." Or tell us about yourself, your background, extra-curricular activities, college record, summer jobs, and career goals. Write to:

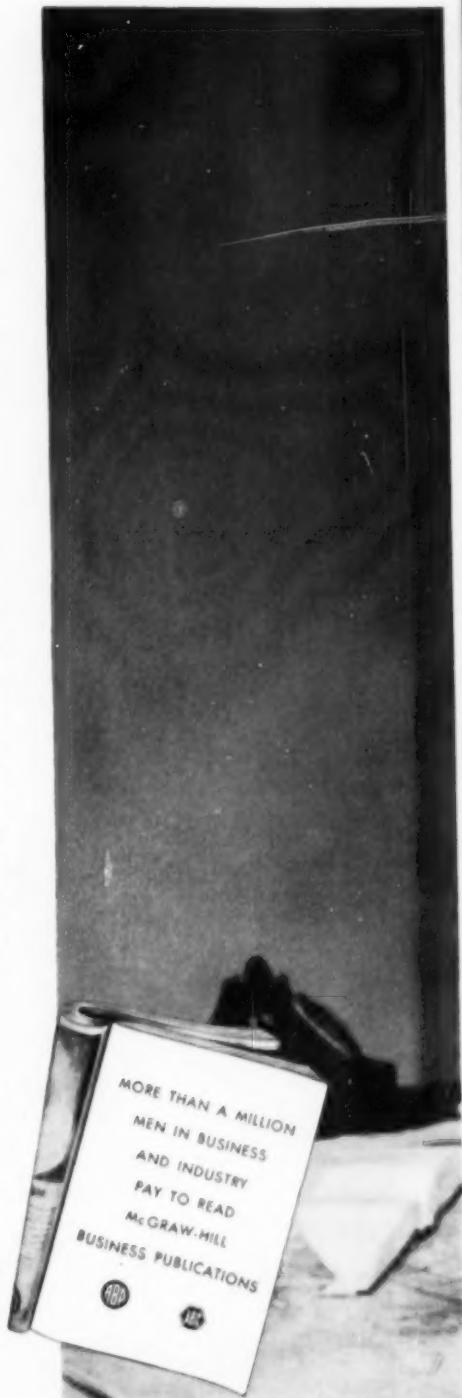
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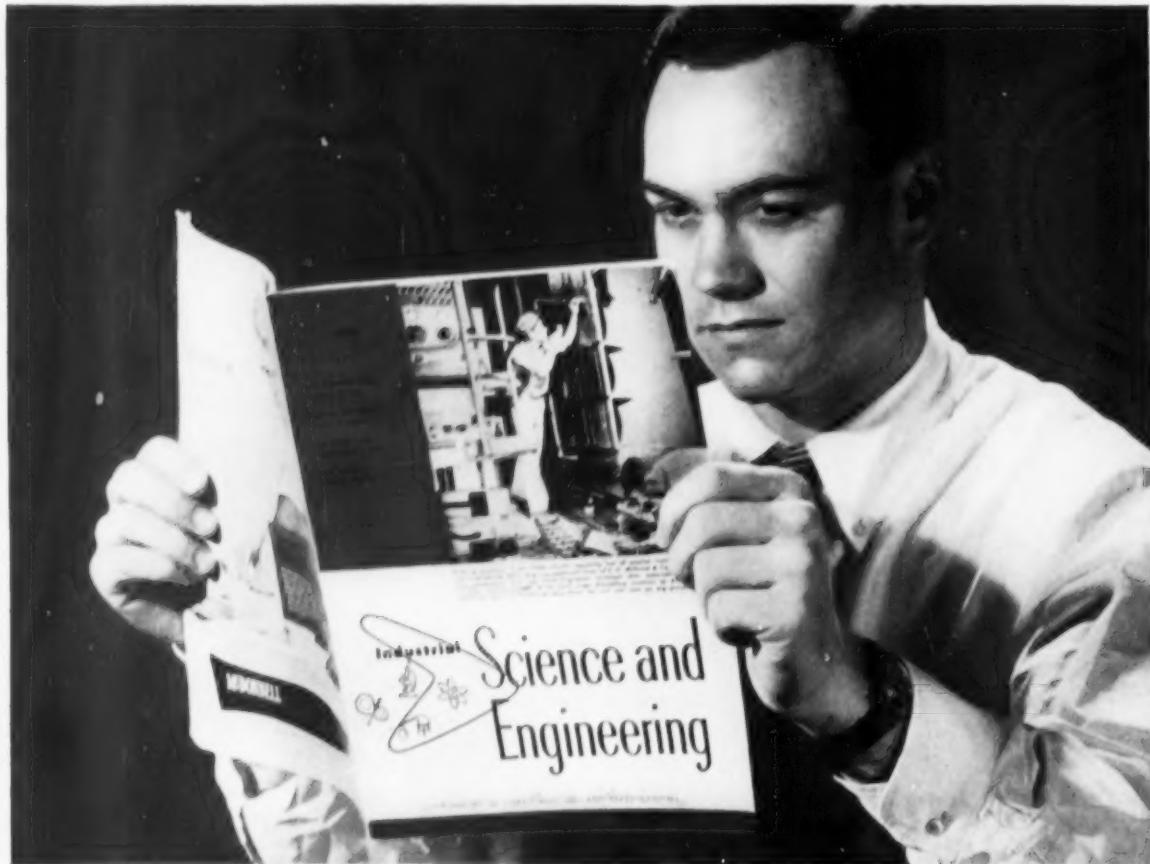
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IMPRESS THEM NOW

- So they know your company.
- So they know your company's product.
- So they will buy your company's product when they are the "point of decision" as business men.

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Science and Engineering

THE MAGAZINE THAT LINKS COLLEGE AND INDUSTRY

KEPPING up with the Joneses has long been the source of many serious problems and even outright financial disaster for many families. Is it possible that this very human weakness is inviting trouble for industry, the placement office, and the recent college graduate?

By keeping one's ear to the ground it is easy to ascertain that pride is causing distortion of truth and warping of the practical judgment exercised by industry's recruiters, placement directors, and college seniors.

Recent college graduates report that high starting salary fever has clouded the judgment and even besmirched the honesty of some of this year's June graduates. Newspapers, national magazines, and college publications have highly publicized the upward surge of starting salaries for college graduates. Not all this publicity has been without considerable exaggeration. High figures have been interpreted as average. Localized conditions have been expressed as general. Students not realizing this have been startled to find that the facts of actual salary offers differ sharply with the fiction that is aided and abetted by industry's recruiters, college placement officers, and the students themselves.

Through pride, students have been reporting exaggerated salary offers to each other in their effort to keep up with the Joneses. The estimated value of fringe benefits is sometimes added to the base salary offer when distortion of the truth needs rationalizing. Just as the college student in the "bull session" has always been inclined to brag about his prowess with the fair

sex and distort the truth of his conquests, even so he likes to try to hold his own with others in the matter of the price tag industry puts upon his business worth. The sad part is that these dream salaries have caused no small number of these business neophytes to turn their backs upon genuine long-range opportunity in favor of jobs which must offer a higher starting dollar in the place of a more stable and genuine monetary

KEEPING UP WITH THE Joneses

future. Moreover, students who hold out for the big dollar offers they hear about put additional inflationary pressure on the salaries of all college graduates. It is a vicious cycle!

The student in his comparative youth and business ignorance can be forgiven for his mistakes, but how about the counselors, the placement directors, the faculty members, and the representatives of industry? What excuses have some of them for their shortsighted behavior?

The role of the placement director is not an easy one! Most of the time he is acutely aware of the need to sell the worth of his services to the university administration. How can he sell himself? Does he succeed to the degree that he has a

(Continued on page 72)

Here are some frank statements on pride as a basic evil in the current job spiral. The author suggests that feelings may be ruffled by its candor, but that now is a time for soul-searching by all involved as inducements continue to mount.

By H. Paul Abbott

*Director of Education
and Male Employment,
North America Companies*

ETS

— A SERVICE
AND A CAREER

The Educational Testing Service is unique both in its offerings to the colleges and industry. It also suggests many new career opportunities

BY MARGARET NEVIN

*Personnel Director
Educational Testing Service*

Test development group (below) works out the details of a new series while machine operators (right) tabulate returns from a previous test.



Educational Testing Service—these words appear in raised letters on a bronze plaque at the entrance to 20 Nassau Street, Princeton, New Jersey. The plaque is small—the entrance otherwise unobtrusive.

Yet for a short period in the lives of hundreds of thousands of students this doorway assumes the importance of the pearly gates. Its address is penned on hundreds of thousands of envelopes by high school students, principals, and headmasters; by G.I.'s in Korea and missionaries' daughters in South Africa. For behind this doorway lies the birthplace of many of the aptitude and achievement tests that help to guide the students of American schools and colleges toward realistic educational and vocational goals.

The ETS visitor, be he a stranger to testing or another measurement specialist, finds a hum of activity behind the scenes on tree-shaded Nassau Street facing Princeton University's beautiful campus.

Should he himself be interested in joining the organization, there are a variety of jobs requiring an equal variety of training and experience. The test and meas-

urement specialist may go into research, statistical analysis, test development, program direction, or advisory work. Subject-matter specialists, especially those with teaching experience, usually work in developing test materials.

Students with an undergraduate degree in psychology or perhaps a master's degree in Educational Psychology may assist in research or program direction or in helping to answer the thousands of inquiries received by the Evaluation and Advisory Service. ETS also makes good use of those with business administration majors or specialization in systems analysis. Persons with a flair for practical writing find posts in areas where brochures on tests and supervisors' manuals are produced while those with training in mathematics or statistics have a wide choice of areas in which to use their background. The graduate who types well, regardless of her major, may work into a variety of different responsibilities and enjoy contacts broader in scope than are usual in the average business organization.

Since the organization and its operation are quite unique, experience in one of its phases is

quite frequently a stepping stone to another phase, although advanced training is necessary for work at a professional level. Those continuing their special studies while working at ETS are reimbursed for tuition and travel expense. Two Psychometric Fellowships are awarded by ETS each year for study for the doctorate at Princeton University, and special summer fellowships in test development are available to school and college teachers.

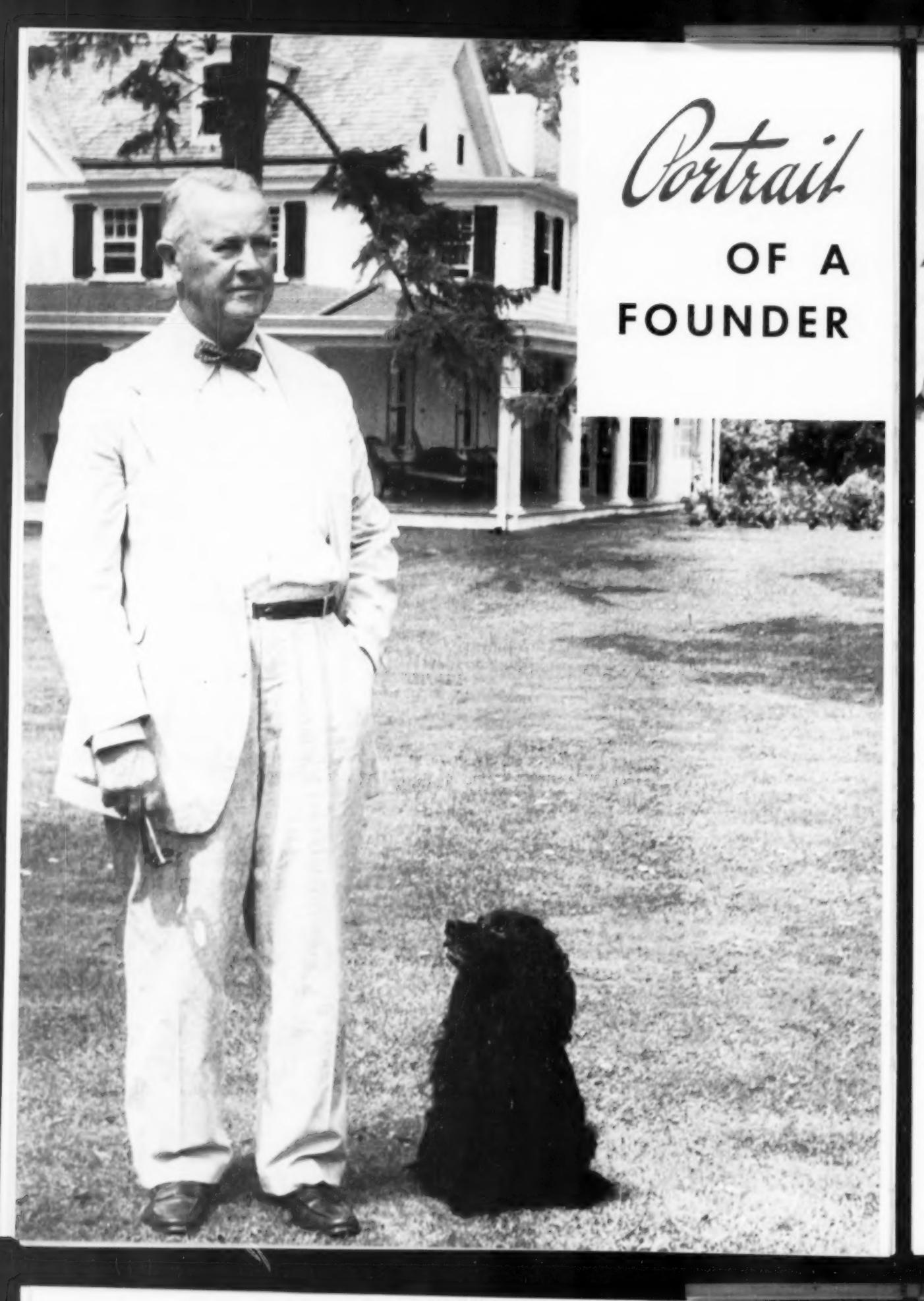
Those who visit ETS to learn more about what goes on behind those red brick walls are taken in hand by the Evaluation and Advisory Service, a small but active division which provides professional counsel on measurement problems of all kinds to the variety of visitors to the organization as well as to the many others who write in their inquiries. One visitor may be a teacher who wants to know about language tests suitable for use in elementary schools. Another may be a representative of the Ministry of Education in Ankara who will spend several weeks at ETS to learn about measurement techniques and how they might be applied in his country's school systems. (*Continued on page 62*)

Henry Chauncey (left), president of ETS, and William W. Turnbull, executive vice-president.



Checking and re-checking are necessary to insure the greatest of accuracy. Here a group of ladies from neighboring Princeton scores those tests which do not adapt themselves to machine operations.





Portrait
OF A
FOUNDER



TODAY, in the midst of unprecedented demand, it is difficult even for those with good memories to recall an earlier day when things were otherwise.

The reference is to the late depression when a Ph.D. with a diploma and ten cents could buy a five cent cup of coffee anywhere.

One who has no difficulty in recalling these times—and hopes fervently they never will return—is a man who has played a major role in the development of college placement and specifically of the JOURNAL—Gordon A. Hardwick.

The man who, through 10 crucial years, was president of the Association of School and College Placement (predecessor of the present Council) is now supposedly retired. As you talk to him on the porch of his gracious colonial home on the Sumneytown Pike in the Gwynedd Valley, a few miles above Philadelphia, you are aware that Gordon Hardwick is busier in retirement than most men are in midstream. You sense the driving force that kept the JOURNAL growing through lean years and the Association progressing toward the national Council of today.

He is also quick to give credit to almost anyone but himself

for developments which, in the late 30's, led to the establishment of the Association. Principal among those accorded founding status by Mr. Hardwick is Dr. Clarence E. Clewell, who as director of placement of the University of Pennsylvania devised the magazine "Placement" for his senior class and friends of the University. It was this publication which became the present JOURNAL. Clewell, now retired, was instrumental in many other respects in launching the new movement. Another who played a less direct but important part was Walter D. Fuller, who was chairman of the original Pennsylvania Job Mobilization Program which was in operation during the winter of 1939-40. The purpose of this organization, launched under the administration of Governor James, was to organize the Pennsylvania recruitment and placement picture (such as it was) to the end that many highly trained graduates could find employment that bore

at least a resemblance to their skills.

The values of the program were so obvious that by 1941 it had become national in scope under the name of the Committee on Educational Cooperation, headed by President Gates of the University of Pennsylvania and including Dr. Clewell among its 18 distinguished members.

The Association of School and College Placement was established on July 1, 1940 as an outgrowth of the temporary Committee on Educational Cooperation. For when this pilot group became in fact the national job-finding body it assigned to the fledgling Association, for solution on a long-term basis, "essentially all of the problems which had come before it during its affiliation with the Job Mobilization Program."

It was with the Association's establishment that Gordon Hardwick began his long and valued relationship as president.

(Continued on page 78)

Principal among those who saw the Council through its early years was Gordon A. Hardwick. Still vitally active in civic affairs, his span of interest includes positive viewpoints on placement today and valuable suggestions for its practitioners.

Now Available . . .



Careers for Engineers is an attractive 24-page brochure which makes it easy for an engineering student to find out what kind of an organization Combustion Engineering, Inc. really is . . . what it has done and is doing . . . its training programs . . . something of its outlook for the future and — in short — whether it appeals to him as a company with which he would like to be associated.

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B-952

PLACEMENT

news

RECRUITMENT

New courses and changes in personnel predominate in recent releases as the colleges and industry gird for intensified spring programs of placement and recruitment.

■ More than 80 of the nation's leading employers offered career information to Michigan State University students at M.S.U.'s eighth annual Career Carnival.

The organizations—industrial, business, and educational, including state and federal agencies—had booths and displays in the M.S.U. Union building. Their representatives, said John R. Kinney, Carnival adviser and assistant placement director, offered vocational information of interest to every student, from information to help the freshman select his major field of study, to job information of particular interest to the senior.

This year's Carnival was the largest one the university has held, according to Kinney. "It is the only event of its kind sponsored by a university," he said. The theme of the Carnival is "Let's Talk It Over." General planning for the event was done by a student committee.

■ Two new positions—Manager of Manpower Planning and Director of College Relations and Recruitment—have been established by the Industrial Relations Department of Koppers Company, Inc.

At the same time, Melvin S. Griffith, Jr., Manager of Koppers

Industrial Relations, announced that Louis L. Newby, formerly of the Harvard University faculty, and Robert L. Smith, formerly with McKinney Manufacturing Company of Pittsburgh, had joined Koppers to assume



NEWBY

SMITH

the responsibilities of these new positions.

Mr. Newby will head up the College Relations and Recruitment program and will be responsible for the establishment and maintenance of a practical and effective college and university relations and recruiting program.

As Manager of Manpower Planning, Mr. Smith's duties will include working with Koppers divisions and staff departments to determine future manpower needs, as well as developing improved procedures for the recruiting and selection of personnel.

■ "A landmark of petroleum education!" This statement was made by Mr. S. K. Makemson of the John Wood Company, as he explained to Muskegon, Mich. city and county educators the purposes and plans of the new cooperative college course in the distribution of petroleum being offered this fall at Western Michigan College.

Adrian Trimpe and Wendall Fidler of Western Michigan described the course as one of in-school work and on-the-job training. The first class of 30 students will be assigned, in pairs, to work in the district offices of cooperating oil companies and in jobber operations.

■ Prospective teachers can decide on any field from art to zoology and be assured of a good position, according to the illustrated bulletin now being distributed by the University of Wisconsin School of Education.

Entitled "Your Future as a Teacher," the publication was written by members of a faculty committee representing every field of specialization to interest young people in preparing at Wisconsin for a teaching career.

The booklet describes the qualifications and rewards of the
(Continued on page 59)

with the



REGIONAL ASSOCIATIONS



Miss Fannie Mitchell, program co-chairman, William H. Cato, SCPOA President, and Mrs. Geraldine Wyatt, President, of the MAOA.

Middle Atlantic officers are: (seated) George Leetch, Mrs. Geraldine Wyatt, Lyon Rogers, Jr., and Miss Cornelie Ludwig; (standing) Arthur Kneen, Jr., David Mader, Richard Showers, and President John Kirkwood. Absent are: Paul Sherwood, William Phipps, and Robert Stiegitz.

THE annual fall meeting of the Midwest College Placement Association was held on Sept. 11 and 12 at the Hotel Carter in Cleveland, Ohio, with a large and enthusiastic attendance of members and guests.

Presented under the co-chairmanship of Arthur Bach of Case Institute and Vic A. Buescher of Thompson Products, the conference featured a program directed by Michael J. Vaccaro of the National Advisory Committee for Aeronautics.

The program included the addresses of conference keynoters and "eat and meet" sessions on important matters of interest,

the latter are summarized by their chairmen in the account which follows.

The first of the keynoters, Dr. Howard Bevis, president emeritus of Ohio State University, reminded placement officers that they are in a strategic position to influence the attitudes and teaching of the faculty as well as the students. Theirs is the job of pointing out the broad application of education to work or to type of occupation. Compared with public and private placement agencies university placement activities are personalized. This family approach,

Dr. Bevis felt, is the university's responsibility.

He reminded placement and industrial personnel that college training is no substitute for training on the job. It is not the place for the acquisition of minor techniques. The time must be put in on more fundamental things—the broader aspects of training. College training is preparation for the years and not for the time immediately following graduation.

Dr. Maynard Boring, Consultant, Engineering Manpower, General Electric Company, who shared the platform with President Howard Bevis, briefly re-

Basic to the development of new placement and recruitment philosophies and techniques are the annual regional meetings. Here are summaries of Midwest and Eastern conferences with the Rocky Mountain survey of job distribution.



The new Board of the Eastern College Personnel Officers includes: (seated) President Philip J. Brockway, Mrs. Hope Brothers, Miss Alice Davis, Miss Ruth Houghton, Miss Elizabeth James, and John F. Butler;

(standing) J. E. Smith, Carlton M. Barlow, Philip H. Yost, William O. Wykoff, Pennell N. Aborn, Samuel H. Beach, and George P. Donaldson. Photograph was taken at Lake Placid Club during the annual meeting.

viewed the history of placement activities as he personally has lived it in forty years of activity. He cited the fact that during the coming year over 6500 individual organizations will visit the colleges and universities of the country to recruit personnel.

He bluntly answered the theme question of the conference, *Is Placement a Profession?* No, he asserted, as long as pressure is put on the schools by industry forcing the placement office into clerical activities. Establishing dates for visits or lists of boys for interviews is not a professional set-up. When people in college know enough about the

boys and their interests and about industry to effectively place students, then only may placement consider itself a profession.

Dr. Bernard J. Muller-Thym, president of Muller-Thym and Associates, management consultants in New York, tackled this question from three sides: salaries, the nature of management jobs, and the preparation of young men and women for management work.

He predicted that if present trends continue, salaries for technical graduates in 1966 will be \$10,000. New services, new developments, and the trend tow-

ard quality will put a premium on technical know-how. Industry at this price will study carefully its utilization of the technical graduate to be sure that he is used more productively than at present where some are drafting and others doing routine work. Working, however, on the raw materials at this level is important.

The nature of management jobs is changing; it has changed drastically in the last five or ten years, he noted. More about the character of management activity is known today than heretofore. It is education con-

(Continued on page 46)

Room to zoom



at GM

GENERAL MOTORS conducts one of the largest non-military research and development programs in America.

This program employs nearly 25,000 engineers and supporting personnel.

These engineers work in hundreds of small, smoothly-operating teams—as part of GM's 34 decentralized manufacturing divisions with plants in 68 U. S. cities.

What do such facts signify to the young engineer who joins us here at General Motors?

To start with, of course, GM's thorough decentralization gives him an opportunity to work in a location of his choice.

He can profit richly from the advice and example of the more experienced engineers in his small group.

In a company that manufactures literally dozens of different products, he finds it possible to develop his natural interests, to follow his natural bent.

But most important of all, in a program the size of GM's, he discovers plenty of room for advancement. GM gives him, as we say above, plenty of room to zoom ahead.

Proof of that fact is furnished by the scores upon scores of engineering graduates who, while still young men, have risen to key technical and administrative posts in this great organization.

In all likelihood, you are acquainted with some deserving young engineers who merit consideration for careers with the most successful industrial company in the world.

So why not pass these thoughts along for their further consideration? Chances are they would be as interested in meeting us as we are interested in knowing them.

***GM Positions Now Available
in These Fields:***

MECHANICAL ENGINEERING
ELECTRICAL ENGINEERING
INDUSTRIAL ENGINEERING
METALLURGICAL ENGINEERING
AERONAUTICAL ENGINEERING
CHEMICAL ENGINEERING
CERAMIC ENGINEERING
CIVIL ENGINEERING

GENERAL MOTORS CORPORATION

Personnel Staff, Detroit 2, Michigan

ALL college placement offices should have some specific information to help evaluate the value of their service. Since we could not obtain such data from numerous inquiries regarding the savings which placement offices effect for their students, we decided to make a study to ascertain such information. The following data provided a partial answer to one approach of evaluating the service of a college placement office, and we hope this study will encourage other schools to study and report on other aspects of their services.

In trying to ascertain what is the placement service worth to a graduating student, we decided to study only one phase — the savings to students resulting from contacting employers on the campus instead of having them go to employers' respective places of business for the first interview. The six June, 1956, graduates with Business Admin-

We wanted to know —

WHAT IS PLACEMENT WORTH?

Ohio State University has taken a first step in putting a dollar value on some of its placement services and suggests that the results have had a salutary effect upon student organizations.

By John E. Steele

Placement Director for Commerce and Administration,
Ohio State University

SUMMARY OF SAVINGS EFFECTED FOR THE SIX
MOST ACTIVE JUNE, 1956, GRADUATES, BY CAMPUS INTERVIEWS

Student	Total No. of Interviews	Transporta- tion	Hotel	Food	Cab to & from Airport or R. R.	Incidentals (cab to hotel, tips, baggage storage, phone, etc.)	Total Cost	
							a	b
1	35	a b	\$1399.15 920.67	\$279 216	\$225 180	\$ 69 54	\$138 108	Max. \$2110 \$1479
2	24	a b	898.71 747.03	189 162	140 125	35 35	113 104	1376 1173
3	24	a b	868.42 512.01	180 126	115 85	44 27	88 62	1295 812
4	23	a b	769.82 626.30	180 144	115 95	40 40	83 71	1188 976
5	25	a b	1074.03 709.81	198 153	155 115	62 37	128 103	1617 1118
6	23	a b	886.90 778.98	153 135	125 115	49 39	99 93	1313 1161
Totals	154	a b	\$5897.03 4294.80	\$1179 936	\$875 715	\$299 232	\$649 541	\$8899 \$6719
Average per Man	25	a b	\$ 982.84 715.80	\$ 196 156	\$146 119	\$ 49 39	\$108 90	\$1483 \$1120

a — Assumes separate trips were made for each employer contacted.

b — Assumes only one trip was made to the city, and employers in that city were contacted at the rate of two per day.

istration training, who were selected for this study, had interviewed in our office a good representation of employers in several types of industries, and from different locations throughout the country.

Our study attempted to compute the cost to the graduates if they had taken the initiative to approach the employers for the first interview and made the trip to each employer's place of business. Certain basic assumptions in computing the expenses had to be made: For example, we assumed that the student would use an automobile to visit an employer who was located under 200 miles from the campus; that public transportation was used for longer trips; if the trip was over 115 miles, we assumed the trip was made the day before

the interview and, therefore, the cost for a hotel room was included; the average hotel cost per night was assumed to be \$9.00, and the average food cost per day was assumed to be \$5.00.

The actual savings computed for the six June graduates studied, amounted to an average of \$1120.00 to \$1483.00 per man. The greatest potential savings amounted to \$2,110.00. These figures can be better visualized by referring to the summary table attached.

The study helps to isolate one factor of a college placement service which is very important to graduating students, to employers, and to the college itself. Because of the greater shortage of candidates in the engineering and scientific fields, placement offices handling such candidates

undoubtedly will be able to show a higher savings per student than is indicated in this study.

The above data have proven very useful in facilitating the cooperation of students, alumni, faculty and administration, and employers who were undecided whether or not to visit the campus for interviewing purposes. We have found that student organizations (activity clubs, fraternities, sororities, dormitories, etc.) showed a special interest in the results of this study and have encouraged their graduates to make better use of our placement service. Because of the shortage of applicants and the tremendous demand on the part of employers, we are naturally grateful for any addition to our supply of candidates for the employers' consideration.

Progress in the N.C.D.S.E.

■ Reporting for the National Committee for the Development of Scientists and Engineers, Dr. Howard L. Bevis, chairman, lists its functions as follows:

To develop public awareness of the need for more and improved education in the physical sciences, as an essential to America's national security and world technological leadership. Public understanding of the need will lead to support among school boards, school authorities, parents, and influential organizations. It can help motivate young people to seek scientific careers.

To encourage united action among educational institutions, foundations, industry, technical and professional organizations, agencies of government, and others concerned with training and employment of scientific manpower.

To produce new programs attracting more students into scientific studies, improving teacher training and teaching techniques, and achieving more effective utilization of the available supply of technological manpower.

Specific projects now underway are:

More effective utilization of scientists and engineers. At work on technical guides and instruction booklets are a task force headed by Dr. Maynard M. Boring of General Electric Company, the Depart-

ment of Defense, and Dr. Herbert S. Parnes of Ohio State University.

Improvement of science and mathematics programs in elementary and secondary schools. Dr. Edgar Fuller, executive secretary, Council of Chief State School Officers, has drafted a proposal action program for schools, industry, and community groups.

Improved use of supporting technicians to relieve highly-trained scientists and engineers. Work in this area includes steps to expand accreditation of technical institutes and training schools, recruitment of teachers by the U. S. Employment Service, definition of technicians in the Dictionary of Occupational Titles used by industry and labor, meeting of a Technicians Panel which expressed problems from the technicians' point of view, steps to provide recognition for technicians in their work.

Measures to improve teacher training and the teaching process in elementary and secondary schools.

Techniques for identifying youth with scientific talent and aptitudes.

Facts on the labor market among scientists and engineers.

Continuing study of Russia's activities in the training and use of scientific manpower.

PHILCO

Famous for Quality the World Over

Big Opportunities Await '57 Grads At Philco Corp.

PHILADELPHIA, PA.—Mr. L. J. Woods, vice-president and director of Research and Engineering announced today that Philco's pioneering and continuing growth and expansion in the electronics field—notably in color television, transistors, computers, data processing systems and guided missiles has opened up unique and rewarding opportunities for young engineers and scientists to extend their professional development upon graduation.

Mr. Woods also pointed out that Philco's recent entry into the home laundry field, and the necessity for developing entire new lines of automatic washers and dryers, in addition to other household appliances, has created many new and attractive openings for beginning engineers.

The location of Philco's research and engineering laboratories in the Philadelphia area provides members of its professional staff with a choice of outstanding accredited universities and colleges in which they may continue studies at the graduate level.

The company's liberal, full tuition refund plan encourages staff members to enroll at the University of Pennsylvania, Drexel Institute of Technology, Temple University, Villanova University or St. Joseph's College.

Seeks Graduates In

- AERODYNAMICS
- CHEMICAL ENGINEERING
- ELECTRICAL ENGINEERING
- ENGINEERING PHYSICS
- MATHEMATICS
- MECHANICAL ENGINEERING
- PHYSICS
- PHYSICAL CHEMISTRY

. . . for Research, Design, Development and Production Engineering positions on Air Conditioners, Antenna Systems, Automatic Machine Test Equipment, Automation Equipment, Communications Equipment, Electron Tubes, Electronic Computers, Electronic Data Processing Systems, Fire Control Systems, General Household Appliances, Guided Missiles, Home and Auto Radios, Home Laundry Equipment, Infra-Red Systems and Devices, Microwave Radio Relays, Microwave Systems, Multiplex Equipment, Navigational Aids, Radar, Ranges, Refrigerators and Freezers, Remote Controls, Servo Systems, Sonar, Systems Engineering, Television (Industrial and Military), Television (Monochrome and Color), Thermodynamics, Transistors and Semi-Conductor Devices, TV Broadcast Equipment, Underwater Ordnance.

For Additional Information and Literature
CONTACT

Mr. Charles Lupton
Manager, College Relations

PHILCO CORPORATION

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Are you aware of the offered young women

**The Army wants you to have full information
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1. The Women's Army Corps—The WAC offers commissions both as second and first lieutenants to qualified college graduates 20-33. WAC officers start on the *executive* side of the desk with a challenging job of responsibility and decision. Positions are open in the following career fields: Personnel and Administration, Intelligence, Information and Education, Civil Affairs and Military Government, Legal and Legislative, Comptroller, Public Information, Logistics, Training and Special Services.

Besides her executive job, a WAC officer enjoys the prestige and pay of a commissioned Army officer, the chance for exciting foreign assignments, a 30-day paid vacation every year and a full social life.

2. The Army Nurse Corps—As an Army nurse, few nursing jobs can equal the opportunities available to young women. Each Army nurse enjoys a career so important she starts as an officer—a rank reserved for those with administrative jobs. Army nurses work in modern, well-equipped hospitals. They have the added satisfaction of helping their country as well as humanity. In addition to having a fuller professional career, an Army nurse enjoys greater financial rewards than she could probably find ordinarily.



career opportunities by the Army?



3. The Army Medical Specialist Corps—

Here is a great opportunity for dieticians, physical therapists and occupational therapists—the chance to serve humanity, country and self. Specialists in these three areas serve humanity by carrying out the most modern medical techniques. They serve their country by performing a job directly benefiting the nation. And they serve themselves by benefiting from the many personal advantages of an officer's career.

Send Today For Your FREE Booklets—Why not send today for your copies of guidance booklets on these important career opportunities? In doing so, you will not only be helping young women seeking a rewarding career, but you will also be helping your country in its defense effort. Simply clip and mail the coupon below or telephone your local Army Recruiting Station, where an Army representative will be glad to cooperate with you in every way possible.

JC 56-2

THE ADJUTANT GENERAL

Department of the Army
Washington 25, D.C.
Attn: AGSN-L

Please send me guidance booklets on the career opportunities available in:

The Women's Army Corps

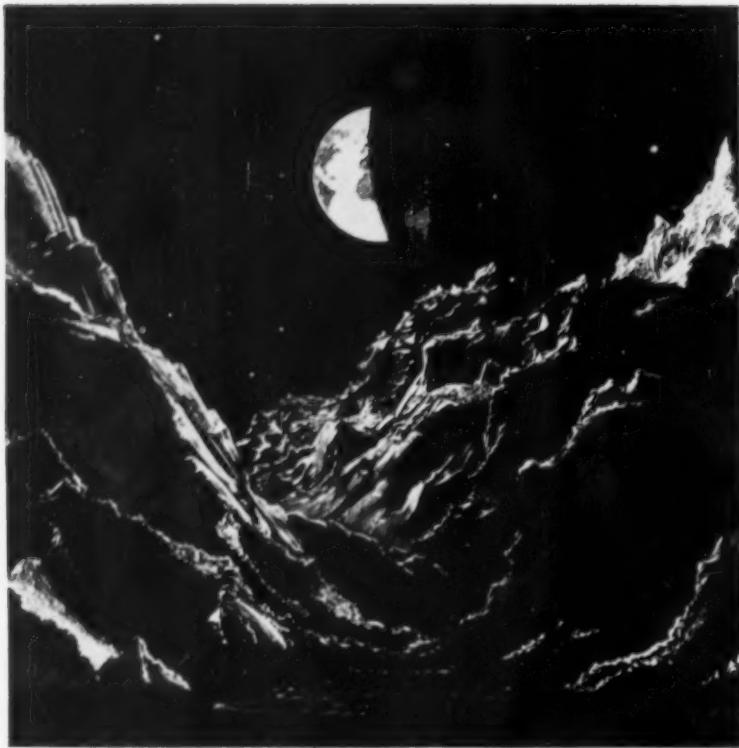
The Army Nurse Corps

The Army Medical Specialist Corps

NAME _____

ADDRESS _____ CITY _____ STATE _____

ORGANIZATION _____ POSITION _____



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The Martin launching vehicle of the first man-made Earth satellite will be the opening gun of a new and endless age of exploration into space.

There are many exciting new opportunities at Martin. If you are doing some down-to-earth thinking on this fabulous future you'd do well to contact J. M. Hollyday, The Glenn L. Martin Company, Baltimore 3, Maryland.

MARTIN
BALTIMORE

THE importance to both college administrators and employers of knowing what happens to college graduates in later life has prompted the present exploration of one limited aspect of this topic: How business administration graduates feel about their jobs some seven years after completing college study (1).

In January 1956 questionnaires were sent to a large sample drawn from the 1948-49 graduating class of the University of Washington who received their degrees in the College of Business Administration.* On the questionnaire, the respondent was asked to indicate his present job or title, how long he had been employed in it, how closely his present work was related to his college major, and was also asked to check items on a rating scale to describe his feelings concerning each of the following factors in relation to his work:

1. Advancement—Opportunities for promotion.

HOW BUSINESS GRADUATES FEEL

About their Jobs

A limited but interesting survey probes the reaction of those who have been employed over six years.

By Carl Dickinson

Placement Director, University of Washington

2. Human Relations—Compatibility of people in the organization.
3. Interest—Intrinsic desirability of the specific work activities.
4. Salary—Present salary, relative to what you should reasonably expect.
5. Security—Chances of keeping job, staying with the organization.
6. Status—Position held in the organization employing you.
7. Working Conditions—Hours, physical conditions, travel, relocation, etc.

He was then asked to rank the above factors in the order of importance for a successful working career, and this ranking was used in conjunction with the rating scale to determine an over-all score for job satisfaction.

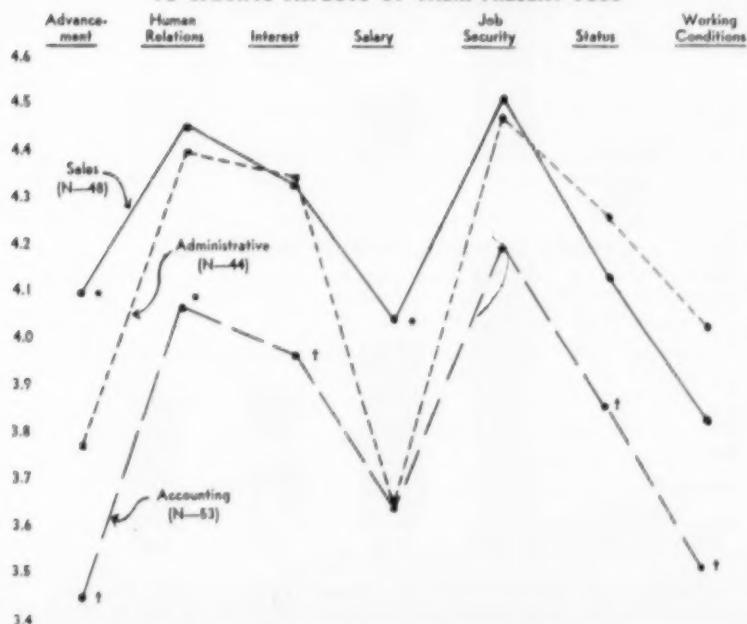
From the questionnaire data, certain comparisons between job fields were possible, as shown in the chart on the following page.

On the over-all job satisfaction scale, those in Accounting work were very significantly less satisfied with their current employment than were those employed in other fields.

Graduates now in Accounting work indicated that their college training was very closely related to their present work activities, while men in the Sales field tended to show that their work has little relationship to any specific college major.

Both in college and high school grade averages (taken from grade transcripts) the men now in Accounting jobs were far above

RATINGS GIVEN BY SALESMEN, ACCOUNTANTS AND ADMINISTRATORS TO SPECIFIC ASPECTS OF THEIR PRESENT JOBS



*Of the original random sample of 327 male graduates, 45 were discarded because their current mailing addresses could not be located with reasonable effort, leaving 282 to whom questionnaires were sent in January, 1956. The total return from two waves of questionnaires was 218, or 77%, and since there were no significant differences in responses between the first and second waves it was felt that this would constitute a representative sampling.

average, while those currently in Sales work were definitely below the average for the whole group.

In the accompanying chart are shown the relative ratings given by Salesmen, Accountants, and Administrators to specific aspects of their present jobs.* The men in Sales work seemed to feel that they enjoy better opportunities for advancement and receive more adequate salaries than the other graduates. Those in Accounting were most dissatisfied in the areas of advancement, interest in the work, their status in the organization, and their working conditions.

It is interesting to note that a very similar pattern of feelings is evident for all three groups of workers, with the Sales group rather clearly showing the greatest over-all satisfaction with their jobs, and the Accounting group definitely the least. All three groups show Advancement, Salary, and Working Conditions as the areas where their greatest problems lie, and all three indicate little difficulty with Human Relations or Job Security.

Even though these are comparatively small samples, it seems reasonable to infer that business graduates who have made careers of Accounting work have not found their jobs to be turning out as they had expected, at least with regard to the factors covered by this study. Their dissatisfaction may be due to a work situation which is actually less rewarding than the other fields included here, in which case certain questions arise. Are high-level administrative positions less accessible via the avenue of Accounting? Do the more specialized requirements of this field and the more detailed nature of accounting duties tend to restrict the broad experience and outlook which men must acquire if they are to assume

(Continued on page 76)

*Respondents were asked to express their feelings toward their present jobs by rating each of the factors on a 5 point scale ranging from 1—Very Poor to 5—Very Good.

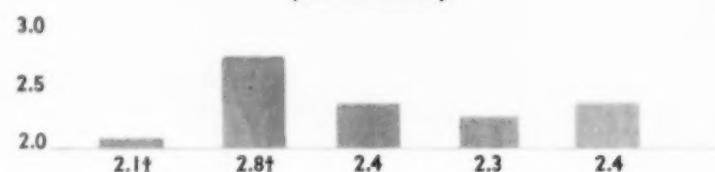
COMPARISONS BETWEEN JOB FIELDS

Sales	Accounting	Administrative	Miscellaneous	Total
N=48	N=53	N=44	N=57	N=202

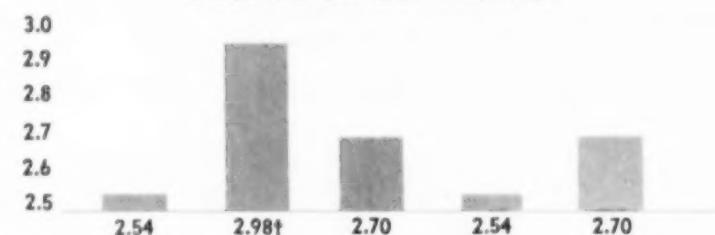
JOB SATISFACTION
(mean scores)



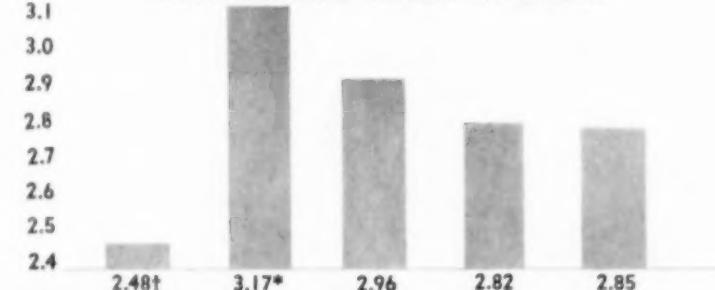
RELATIONSHIP BETWEEN PRESENT WORK
AND COLLEGE MAJORS
(mean scores)



COLLEGE GRADE AVERAGES



HIGH SCHOOL GRADE AVERAGES



Note: †Difference from the mean of all others is significant at the 1% level.

*Difference from the mean of all others is significant at the 5% level.

THE ARMA POST-GRADUATE WORKSHOP FOR YOUNG ENGINEERS

—Is a major reason why career-minded engineers select Arma—and why Arma selects young engineers like you for your professional potential. For Arma invests time and money in comprehensive training programs to help you develop that potential—and make your transition from campus to industry a good one.

At Arma you will have time to survey your interests and aptitudes before selecting your field—a choice enriched by the wide variety of projects and skills that have made Arma a leader in electronics and electromechanical instrumentation.

On-The-Job Technical Training

You begin your career on a sound foundation with Arma. Three two-month rotated assignments give you opportunities to look into different areas of activity—and assignments in Missile Guidance, Project Engineering, Product Engineering and Research and Development further assist your development.

You'll work in digital computers and analog, servomechanisms, gyroscopics, inertial guidance, missile control systems, fire control systems and many other fields of instrumentation—learning about them in anticipation of your eventual assignment.

Planned Professional Development

Your full professional capacities are developed along with the technical. Survey courses, lectures and round-table discussions are part of your training. Seminars and conferences develop your leadership abilities. All the while, you get automatic salary increases—and your progress backed by the stability and entire resources of Arma.

Freedom And Time For Personal Development

At Arma you will associate with men of unusual achievement in an atmosphere of technical sophistication. Nine outstanding colleges are within easy reach, and Arma encourages and subsidizes further education for engineers on all levels. Time and resources are available for you to make original contributions to technical publications, and professional society membership is subsidized.

Relocation Assistance is available and in many instances expenses paid when you move your family to Long Island. Suburban life here is famous for ideal pleasure-living—and is within minutes of the plant.

Your future career is backed by Arma's stability and its proven record of pioneering technical progress. Your best future is with Arma.

See the Arma Representative when he visits your campus, or send inquiries to:

Mr. Charles S. Fernow

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ARMA

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ARMA — a division of American Bosch Arma Corporation — develops, designs, manufactures, and conducts broad research on precision electronic and electromechanical components and complex control systems.

REGIONAL ASSOCIATIONS

continued from page 35

scious. Management personnel now get time off to think, to analyze their own experiences, to derive new principles, and to plan course of action. It represents today a new leadership group, a more thoughtful and reflective one, an intelligent functioning group. They know more about technical developments; they have the ability to be a center of group activity. It is essentially an enlightened and purposeful group.

The young men and women preparing for managerial work require a sensitivity to the kind of forces at work in our world today. Do they appreciate the effect of the change, for example, from the oral to the visual? Business must be cognizant of the economic, social, and cultural character of the society it serves.

Dr. Thym considers that women have a rough deal in industry today. They can be gotten cheaper. But because of the manpower shortage and the fact that the work must be done, they will have increasing opportunities.

Discussions started at luncheon tables assigned for topics and continued in session thereafter. These proved to be the most popular feature of the conference, for they elicited participation from all attendance. Summaries of these sessions follow.

Luncheon Summaries Listed

Starting salaries are not "run-away." They are primarily based upon the supply and demand. The constantly increasing hourly rates have also been an influencing factor.

It is necessary for industry to be competitive in the matter of starting salaries. The problem

is to determine what starting salaries are being paid by competition and industry generally.

There is need for more reliable responsible information about starting salaries. The placement people can render a great service by publishing starting salaries paid by representative industries and actual offers received by graduates. In addition, it is imperative that each company get actual figures from their competitive and representative industries in the area where they are recruiting.

Consideration is given for military service and for summer experience in the matter of starting salaries but not for marital status or age.

The group felt it was very unwise to offer a "bonus" in the form of an additional month's salary or a sum of money to induce a graduate to join an organization. The most that should be done is the payment of moving expenses to the location where the graduate will be assigned.

Considerable importance was attached to the problem of seeing that the salaries of students out from two to five years were properly adjusted. Using the current starting salaries as a base, some yardstick should be worked out to determine that the employee making good progress is given credit for experience.

It was felt that salaries would be increased about five to six per cent per year in the future and starting salaries would be increased in this range.

The technical graduate was receiving on the average at least \$25 and closer to \$35 more than the non-technical graduate per month.

It was felt that the demand for college seniors would be more intensive in the years ahead. The fact that there will be more graduates available in about 10 years did not change this opinion because the demand for more and more college graduates would increase and would absorb all available graduates.

Because the service industries have traditionally not told their story about employment opportunities to the American public, many faculty and college personnel are grossly uninformed in this area. Consequently recruiters from the service industries are constantly plagued by a dearth of college interviewees who are ignorant themselves, or have completely erroneous impressions of the career possibilities or were not in the meantime properly counseled or advised by the faculty.

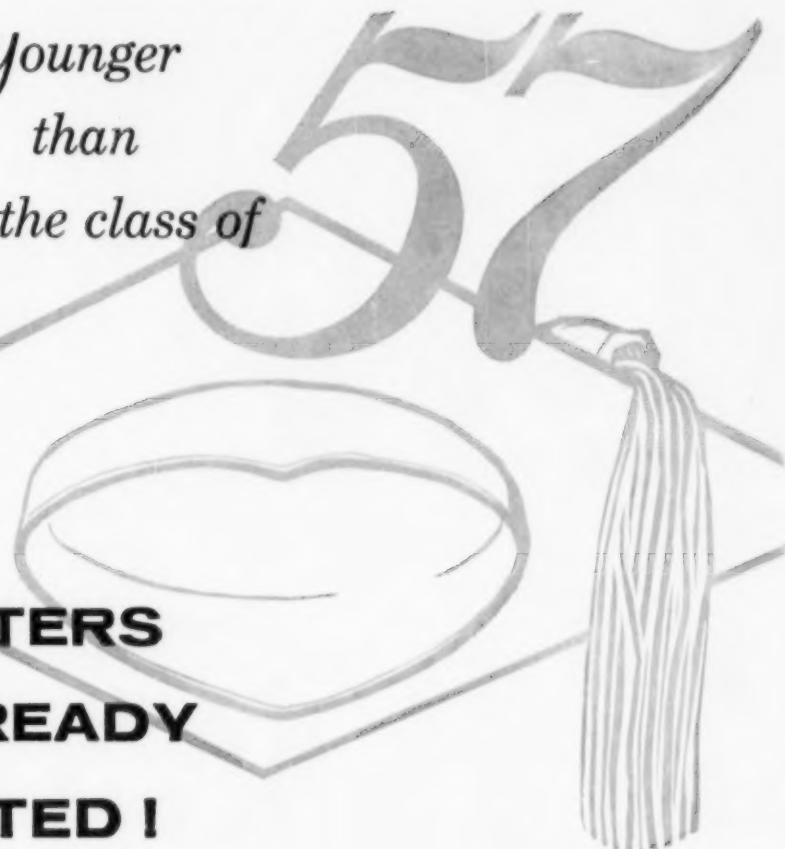
Associations Combat Handicaps

To combat these handicaps the service industries are banding together where practicable into industry associations. They hope to educate the public through such organizations as the American Banking Institute, the Institute of Insurance, etc., by institutional advertising and publications. It will take years perhaps to overcome life-long misconceptions.

Diversified industries were represented in this session. Internships as defined included on-the-job training as well as formal training. They were recognized to be an important phase of the indoctrination of the new employee into industry. Specification today makes training mandatory. Opinions were about equally divided as to the advantages of on-the-job training versus formal class room programs.

Through supervisory and executive development they should be of short duration and are preferred to those extending beyond twelve months. College graduates are not adverse to entering training programs which

*Younger
than
the class of*



**HELICOPTERS
HAVE ALREADY
GRADUATED !**

But as it will be for seniors in June, the "graduation" of helicopters was only a beginning, literally a *commencement*.

But the rotary-winged craft *and* the college student of today face a future that is at once challenging and promising.

To the young, technically trained people now at Sikorsky Aircraft and to those who will *join* the Sikorsky team in the near future . . . belongs the thrill of developing a product of their generation.

That product already carries the mantle of the world's most versatile aircraft.

In order to maintain its leadership in the fast-growing helicopter field, Sikorsky Aircraft gives the young engineer every opportunity to make his a life full of professional satisfaction. In line with this policy the company provides graduate study fellowships for those who wish to progress and further their engineering education.



SIKORSKY AIRCRAFT

BRIDGEPORT 1, CONNECTICUT

ONE OF THE
DIVISIONS OF
UNITED AIRCRAFT
CORPORATION



Officers for 1957 in the Southern College Placement Officers Association are: (seated) Howard Lumsden, President Johnie Branch, and Mrs. Josephine Schaeffer; (standing) A. L. Ross, Maurice Mayberry, and George Street. Not in the picture, taken at Old Point Comfort, was James Raper.



New Southwest Placement Association officers include: John Brooks, Mrs. Jean A. Jenkins, Weldon Williams, Frank Carroll, H. A. Bradley, and President Arch Hunt. Conference was at Fort Worth. (Below) a three act "Play of Recruitership" featured a cast of "characters" at ECPO's annual conference. The production was penned by Marion Merrill and staged by Carlton Barlew.



are well thought out, planned and executed, and at an instruct- or level to which they have been accustomed.

Many differences of opinion appeared to exist throughout the industries represented with respect to wages paid, seniority privileges, vacation, sick leave, and insurance benefits during training.

"Counseling" as applied to the task of a college recruiter means any situation related to job placement where he can help an applicant by advice or suggestion if he feels qualified to do so. In the professional sense of the word he cannot be called a counselor.

There are no well-defined limits to the extent to which a recruiter may counsel an applicant. Although there may be many occasions in which a recruiter might engage in counseling applicants, either singly or in groups, the best consideration of the topic would lie in the area of the campus employment interview.

Most participants agreed that the extent to which a recruiter engages in counseling will depend upon his experience and judgment. A proper attitude is most important. The applicant must also be receptive to suggestion and help.

It was felt that a recruiter should, if requested by college personnel, spend extra time counseling students with job problems if he can be of help and has the time to do so.

A recruiter who is seasoned by experience in dealing with people will obviously be best qualified in the counseling of applicants. He should exercise good judgment, however, and not proffer advice unless he feels qualified and is confident that counseling is in order.

Much discussion was held on the characteristics of a good recruiter. The most pertinent

(Continued on page 82)

*our future -
your tomorrow -
is unlimited*

We invite the college graduate to consider employment opportunities with B. F. Goodrich. We believe we can offer some of the greatest challenges in all of American industry. Our business encompasses the chemical, plastics, rubber and textile industries. It is closely aligned with many, many others. It is a large business with literally thousands of facets — and its potential is inviting. At B. F. Goodrich there is and always will be a need for men of vision with the ability to accomplish things.



The B. F. Goodrich Company, General Offices, Akron 18, Ohio

LETTERS TO THE EDITOR

Continued from page 10

ethical standards of students who are under consideration for employment. I believe that most students who are being interviewed by companies find it a new experience and will welcome suggestions regarding types of conduct that might well be considered unethical. I have therefore prepared a list of such suggestions in consultation with our graduate students who are working for a master's degree in industrial relations.

I would welcome any comments from your readers, including suggestions for revisions or additions.

Several recruitment officials have asked me whether I have any suggestions regarding company policies on this subject.

The Joy Manufacturing Company

Henry W. Oliver
Building

Pittsburgh 22,
Pennsylvania

"Machinery for
the
Basic Industries"

May I therefore present one major suggestion. I have been surprised at the great variation in company policies regarding notification to students of the results of campus interviews. Some companies apparently send no notice at all to students in whom they have decided they are not interested. I would therefore suggest that if a company does not plan to write to each student it has interviewed, it should at least notify all students at the end of the interview that they may consider that the company is not interested in them at this time if they do not hear from the company within three weeks. Such a policy should considerably reduce the uncertainties of the student.

1. Study in advance the library files on each company that offers interviews. Find out as much as you can about the firm *before* you decide to sign up for an interview. Limit your contacts to firms that are of interest to you, so as not to waste your time and theirs.
2. Never miss an interview appointment. The interviewer has set aside this half-hour for you. Be punctual.
3. If, at the end of an interview, you have decided that you would not care for employment with this company, tell the interviewer so at once (without being critical). The collecting of job offers is not a reputable hobby. The interviewer will appreciate being spared the possibility of making a futile recommendation to his company. On the other hand, if his company has a special appeal to you, tell him so.
4. On plant-visitation trips keep your expenses within reasonable limits. It is a business trip — not a spree. Help to keep company costs down before you start your job just as you would afterward.

5. If you visit more than one company during a trip, divide the cost between them. It's a fine opportunity to demonstrate your honesty.
6. Beware of a company that resorts to shady practices to win you. Be sure that its integrity equals your own.
7. When you get an offer, acknowledge its receipt at once. The company will normally indicate how long it will hold the offer open for you. It would be considerate on your part, however, to not wait until the last day of the deadline to give the company a definite "yes" or "no", but to notify it as soon as you reasonably can in view of your negotiations with other firms.
8. Once you accept a job, don't give a thought to any other. Immediately notify other companies which are considering you that you are no longer available.

Sincerely yours,

William H. McPherson

Professor of Economics in
Labor and Industrial Relations
and Student Placement Officer,
University of Illinois

Placement Job Analysis

Urbana, Illinois

Sir:

Recently I came across very complete job analyses for Director of Placement and Placement Officer in the October, 1951 issue of *Occupations*.

Experienced placement people seeking to describe their positions and newer placement officers looking for a definition of placement work may find these analyses helpful.

ROBERT CALVERT, JR.
New York City

Coordinating Placement Officer,
University of Illinois

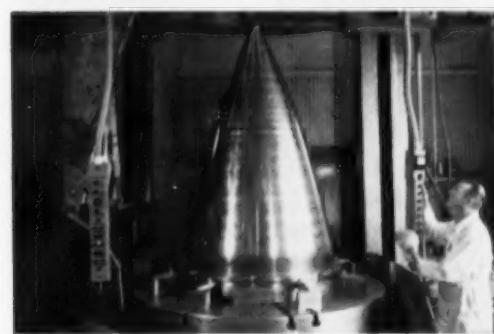
In which of these
3 activities does YOUR
FUTURE lie?

**RESEARCH AND DEVELOPMENT.**

Projects of the engineers and scientists in this area at Hughes encompass practically every known field of electronics—and often border on the unknown. It is this team which is responsible for the Falcon air-to-air guided missile and the Automatic Armament Control System. Some of the projects include Micro-wave Tubes and Antennas, Digital and Analog Computers, Ground and Airborne Radar systems, long-range highly miniaturized communications equipment, and missile systems.

**FIELD SERVICE AND SUPPORT.**

Engineers in the Field Service and Support activity are responsible for the maximum field performance of Hughes-produced military equipment. Theirs is essentially liaison work with the company, airframe manufacturers, and the armed forces. Their recommendations are often the basis for important modifications. Openings exist for Engineers assigned to airbases and airframe manufacturers, Engineering Writers, Laboratory and Classroom Instructors, and Equipment Modification Engineers.

**MANUFACTURING AND PRODUCTION.**

In this area at Hughes technical experts are responsible for the development of production techniques for the manufacture of advanced electronic equipment from the Research and Development Laboratories. Some of the open areas include Engineers for Test Equipment Design; Quality Control; and Manufacturing Processes for semiconductors, automatic controls and miniaturized electronic systems.

You will find Hughes to be unsurpassed as a firm in which to begin a successful career. Last year, in fact, 327 June and February graduates joined the Hughes staff. Since then they have been working directly with the nation's finest scientists and engineers.

Hughes is the West's leading center for advanced electronics. The company's interest in electronics spans both the military and commercial fields. Whether you choose Research and Development, Field Service and Support, or Manufacturing and Production, you

will be rewarded with a top salary, a challenging future, and the ideal climate of Southern California.

If you are interested in the long-range opportunities available at Hughes, contact your college or university placement office or mail a resume to us today.

Scientific Staff Relations

HUGHES

Research and Development Laboratories

HUGHES AIRCRAFT COMPANY
Culver City, California

FROM U. S. OFFICE OF EDUCATION STATISTICS, THE JOURNAL OFFERS

FUTURE COLLEGE ENROLLMENTS

THROUGH THE COOPERATION OF THE RESEARCH AND
STATISTICAL SERVICES BRANCH

For these projecting recruiting programs, the following statistics will provide guidance in calculating "supply vs. demand"

PROJECTIONS OF FIRST-TIME ENROLLMENT, AND TOTAL FALL ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION IN CONTINENTAL UNITED STATES: FALL 1956 to 1970

(Projections as of March 1956)

FALL OF	FIRST-TIME ENROLLMENT			TOTAL FALL ENROLLMENT		
	Total	Men	Women	Total	Men	Women
1955	682,639	426,787	255,852	2,695,340	1,769,913	925,427
1956	706,000	441,000	265,000	2,907,000	1,916,000	991,000
1957	727,000	453,000	274,000	3,104,000	2,052,000	1,052,000
1958	741,000	461,000	280,000	3,259,000	2,156,000	1,103,000
1959	771,000	479,000	292,000	3,399,000	2,245,000	1,154,000
1960	828,000	514,000	314,000	3,567,000	2,351,000	1,216,000
1961	910,000	564,000	346,000	3,790,000	2,492,000	1,298,000
1962	924,000	572,000	352,000	4,004,000	2,628,000	1,376,000
1963	924,000	571,000	353,000	4,189,000	2,747,000	1,442,000
1964	969,000	600,000	369,000	4,372,000	2,865,000	1,507,000
1965	1,163,000	720,000	443,000	4,677,000	3,059,000	1,618,000
1966	1,221,000	756,000	465,000	5,006,000	3,271,000	1,735,000
1967	1,234,000	763,000	471,000	5,331,000	3,482,000	1,849,000
1968	1,237,000	764,000	473,000	5,617,000	3,669,000	1,948,000
1969	1,267,000	781,000	486,000	5,796,000	3,784,000	2,012,000
1970	1,372,000	804,000	568,000	6,006,000	3,877,000	2,129,000

PROJECTIONS OF REGULAR SESSION ENROLLMENT IN INSTITUTIONS OF HIGHER EDUCATION IN CONTINENTAL UNITED STATES: 1954-55 to 1970-71
 (Projections as of March 1956)

Academic Year	Regular Session Enrollment		
	Total	Men	Women
1953-54	2,514,712	1,613,466	901,246
1954-55	2,755,000	1,766,000	989,000
1955-56	2,996,000	1,965,000	1,031,000
1956-57	3,232,000	2,128,000	1,104,000
1957-58	3,450,000	2,278,000	1,172,000
1958-59	3,623,000	2,394,000	1,229,000
1959-60	3,778,000	2,493,000	1,285,000
1960-61	3,964,000	2,610,000	1,354,000
1961-62	4,212,000	2,767,000	1,445,000
1962-63	4,451,000	2,919,000	1,532,000
1963-64	4,657,000	3,051,000	1,606,000
1964-65	4,860,000	3,182,000	1,678,000
1965-66	5,199,000	3,397,000	1,802,000
1966-67	5,564,000	3,632,000	1,932,000
1967-68	5,926,000	3,867,000	2,059,000
1968-69	6,243,000	4,074,000	2,169,000
1969-70	6,443,000	4,202,000	2,241,000
1970-71	6,676,000	4,305,000	2,371,000

Projections of degrees in this and the opposite chart as well as that on page 54 are based on projections of populations, entrance rates into college, and graduation rates. Acknowledgment is made to Howard G. Brunsman, Chief, Population and Housing Division, Bureau of Census, for population estimates. The projections from 1955-56 through 1956-66 utilize population estimates released on December 9, 1953 and those from 1966-67 through 1970-71 released on May 16, 1956.

PROJECTIONS OF EARNED DEGREES CONFERRED IN INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES AND OUTLYING PARTS BY GROUP AND FIELD: 1956-57 and 1957-58

The following figures are presented by the JOURNAL on the basis that projections in terms of career specializations are of particular interest. This report, supplied by the Office of Defense Mobilization to the Organization for European Economic Cooperation was prepared on August 30, 1956. It has been compiled according to special O.E.E.C. requirements and does not relate directly to accompanying statistics supplied by the Office of Education. As a consequence, these figures should be used, as they are intended, only for general guidance.

Group and field	Total	1956-57			1957-58			
		1st-level degree	2d-level degree	Doctorate	Total	1st-level degree	2d-level degree	Doctorate
ALL FIELDS	424,200	349,800	65,950	8,500	474,400	395,100	70,950	8,390
Agriculture group.....	13,000	11,000	1,650	480	15,300	13,000	1,800	480
Agriculture and Forestry	12,100	10,000	1,630	480	14,400	12,200	1,780	470
Veterinary medicine ...	900	900	20	10	900	900	20	10
Pure Sciences.....	37,700	28,500	6,350	2,850	43,600	33,800	6,980	2,830
Biological Sciences....	14,800	11,500	2,350	950	17,200	13,600	2,680	940
Chemistry.....	9,900	7,400	1,460	1,030	11,500	8,900	1,530	1,030
Physics.....	3,900	2,500	950	500	4,500	2,900	1,020	500
Geology.....	3,000	2,200	630	150	3,500	2,600	700	150
Mathematics.....	6,100	4,900	960	230	7,700	5,700	1,040	230
Applied Sciences.....	41,400	36,000	4,420	600	46,000	40,800	4,620	600
Civil engineering	8,000	7,300	660	40	8,900	8,200	680	40
Chemical engineering	4,800	4,100	570	160	5,500	4,700	640	160
Mechanical engineering	10,000	9,200	750	80	11,000	10,200	790	80
Aeronautical engineering	1,300	1,100	230	30	1,400	1,100	260	30
Electrical engineering...	8,900	7,700	1,050	130	9,800	8,500	1,100	130
Mining engineering ...	500	400	30	(9)	500	400	30	(9)
Metallurgical engineering	900	700	150	60	1,100	900	170	60
Other engineering....	7,000	6,000	980	120	7,900	6,800	970	120
All Other.....	332,100	274,100	53,540	4,540	369,400	307,400	57,560	4,490

In the accompanying chart at the right, biological sciences include anatomy, bacteriology, biochemistry, biology, botany, entomology, physiology, and zoology. Physics includes astronomy. Geology includes meteorology. Civil engineering includes architectural engineering. Chemical engineering includes petroleum engineering. Other engineering includes agricultural, ceramic, engineering mechanics and physics, general, geological, geophysical, industrial, naval and marine architecture, sanitary, textile, unclassified, and other.

PROJECTIONS OF EARNED DEGREES CONFERRED IN INSTITUTIONS OF HIGHER EDUCATION IN CONTINENTAL UNITED STATES:

1955-56 to 1970-71

(Projections as of March 1956)

BACHELOR'S AND 1ST PROFESSIONAL

Academic Year	Total	Men		Women		Total	Men		Women	
		Men	Women	Men	Women		Men	Women	Men	Women
1954-55	285,138	182,463	102,675	58,165	38,712	19,453				
1955-56	325,000	211,000	114,000	57,400	38,100	19,300				
1956-57	347,000	225,000	122,000	65,900	44,300	21,600				
1957-58	392,000	259,000	133,000	70,900	47,500	23,420				
1958-59	421,000	282,000	139,000	80,700	53,000	25,720				
1959-60	437,000	292,000	145,000	87,300	60,200	27,100				
1960-61	450,000	300,000	150,000	91,200	62,700	28,500				
1961-62	459,000	306,000	153,000	94,600	64,800	29,800				
1962-63	478,000	318,000	160,000	97,000	66,400	30,600				
1963-64	515,000	342,000	173,000	101,700	69,400	32,303				
1964-65	567,000	376,000	191,000	110,300	75,100	35,223				
1965-66	576,000	382,000	194,000	122,000	83,000	39,200				
1966-67	576,000	381,000	195,000	124,900	84,800	40,100				
1967-68	605,000	401,000	204,000	125,700	85,000	40,700				
1968-69	728,000	482,000	246,000	132,800	89,900	42,920				
1969-70	766,000	507,000	259,000	160,900	108,700	52,220				
1970-71	775,000	513,000	262,000	170,200	114,900	55,300				

Academic Year	Total	Men		Women		Total	Men		Women	
		Men	Women	Men	Women		Men	Women	Men	Women
1954-55	8,837	8,011	826	352,140	229,186	122,954				
1955-56	8,270	7,500	770	390,670	256,600	134,070				
1956-57	8,460	7,690	800	421,380	276,960	144,400				
1957-58	8,380	7,590	790	471,280	314,090	157,190				
1958-59	9,750	8,880	870	511,450	345,880	165,570				
1959-60	10,520	9,580	940	534,920	361,780	172,040				
1960-61	12,180	11,130	1,030	533,380	373,850	179,330				
1961-62	13,360	12,280	1,080	566,960	383,080	183,980				
1962-63	14,000	12,870	1,130	589,000	397,270	191,730				
1963-64	14,530	13,370	1,180	631,250	424,770	206,980				
1964-65	14,980	13,780	1,200	692,280	464,880	227,400				
1965-66	15,750	14,490	1,260	713,950	479,490	234,460				
1966-67	17,140	15,770	1,370	718,040	481,570	236,470				
1967-68	19,050	17,530	1,520	749,750	503,530	246,220				
1968-69	19,550	18,010	1,540	800,350	589,910	290,440				
1969-70	19,720	18,160	1,560	833,840	633,620	312,660				
1970-71	20,940	19,310	1,630	946,140	647,210	318,930				

YOU TELL US YOUR GRADS WANT THIS:



THIS IS WHAT PROCTER & GAMBLE OFFERS:

"P & G finds its men through a definite program for hiring, training, and promotion of potential executives. It gives the same kind of attention to developing management men as it does to developing a new product, or the market for it."

Business Week

"The record of P. & G.'s spectacular achievements in the detergent field nicely demonstrates the Company's skillful co-ordination of product research and aggressive marketing."

FORTUNE Magazine

"At a time when many a U. S. businessman fears a recession and the threat of much tougher competition, P. & G. is a prime example of 1) how to sell goods despite recessions, and 2) how bitter competition both inside and outside a company can make it grow."

TIME Magazine

PROCTER & GAMBLE
CINCINNATI, OHIO

ADVERTISING
BUYING
COMPTROLLER'S DIVISION

ENGINEERING
MANUFACTURING
MARKET RESEARCH
OVERSEAS

RESEARCH & DEVELOPMENT
SALES
TRAFFIC

WHERE WILL "MY" GREATEST PERSONAL GROWTH

A. With a GIANT Company?

Advantages

Long established National Trade Name
In business for many years
Security in large numbers
Long range promotion possibilities

Disadvantages

Expansion and growth of company
has already taken place
Business volume not accelerating
Lost among many in company
Slow Promotion Program

B. With a "young" . . . but well established GROWTH Company?

Where expansion of plants to provide increased sales volume of present product lines, and building of additional plants for new products . . . IS NOW TAKING PLACE.

Where young men are being placed IMMEDIATELY into positions of executive responsibility in management or technical assignments.

Where young men are IMMEDIATELY made a vital part of an aggressive "young" company whose history during the past 25 years has been one of spectacular success in growth to a position of international leadership in their product fields.

Where young men find an "ever-present" OPPORTUNITY for leadership and administrative responsibility in a GROWTH Company.

Where MANAGEMENT DEVELOPMENT activities are definite and planned responsibilities of top management to insure having young men ready for the executive and administrative positions that expansion has and is producing.

C. And Equally Important:

Where young men find security with a company whose products meet a constant need in world-wide consumer markets representing virtually a depression proof business.

Where starting income is normal but soon increases to above-average as young men progress into increasingly responsible assignments.

Where young men find challenges and problems to solve in each of the company's divisions: Manufacturing, Research, Product Development, Financial, Industrial Relations, Distribution, Marketing, Sales, Advertising and Foreign Operations.

Where young men become associated with a Company that in 25 years has grown from a small factory occupying only 1000 sq. ft. of space to a multi-plant international company of over 1,200,000 sq. ft. today, with a planned expansion of 2,000,000 sq. ft. by 1958.

Where young men are NEEDED to fill NEW positions created by expansion and to replace others being promoted.

**INTERNATIONAL
CORPORATION**

PLAYTEX PARK

L I ACHIEVE H-OPPORTUNITY AND HAPPINESS?

D. Over 2,500% EXPANSION

The INTERNATIONAL LATEX CORPORATION, a relatively young company of only 25 years, has experienced one of industry's most unusual success records . . . expansion of over 2,500% in the past 8 years. With a business volume today of over \$40,000,000, with projected expansion into new markets, building of new plants, and with greatly enlarged operations in all divisions. The International Latex Corporation (trade-name PLAYTEX) offers *The Unusual Opportunity* most college graduates seek when making a decision for the type of company with which they can achieve greatest *Personal Growth and Happiness*.

E. Company Growth Produces Individual Growth Opportunities

Playtex is NOT a company in which young men become lost. It is rather a GROWTH company that needs and takes great interest in the development of young men to fill important key positions in a constantly expanding operation. Growth is indicated by this analysis:

1932	1,000 sq. ft. factory space	6 employees
1942	75,000 sq. ft. factory space	250 employees
1952	650,000 sq. ft. factory space	2,800 employees
1956	1,200,000 sq. ft. factory space	5,000 employees
(projected)	1958 2,000,000 sq. ft. factory space	7,500 employees
"	1960 2,500,000 sq. ft. factory space	10,000 employees

Are you one of the future KEY EXECUTIVES Playtex will appoint to fill many new opportunities that their constant growth is producing?

Continued GROWTH and EXPANSION of Playtex is creating openings for young men in which they assume at once responsibilities in active work.

Keen young minds, ambitious men who can accept immediate responsibility are finding Playtex a satisfying and challenging opportunity.

Inquiries are welcomed. WRITE THE DIRECTOR OF COLLEGE RECRUITING.

ATIONAL
TEX
RATION

DOVER, DELAWARE

Opportunities for Graduates

	Chemistry	Chemical Engineering	Mechanical Engineering	Administrative Engineering	Industrial Engineering	Electronics	Liberal Arts	Business Administration	Accounting	Marketing	Statistics	Personnel Administration	Social Sciences	Graphic Arts	Foreign Trade
Manufacturing	X	X	X	X	X	X	X	X	X						X
Research and Product Development	X	X	X			X	X	X	X	X					X
Finance							X	X	X	X					X
Advertising							X		X	X				X	X
Industrial Relations							X				X	X			X
Foreign Operations	X	X	X	X	X	X	X	X	X	X					X

GROWTH COMPANY IN A GROWTH INDUSTRY

With an eye to the future, Monsanto is seeking scientists and technologists for the company's expanding operations.

Monsanto is a young, ambitious, fast-growing company. We make some 500 different products for 56 different industries. Out of our research laboratories and manufacturing plants come soil conditioners, detergents, food phosphates, petroleum and rubber chemicals, textile and pharmaceutical compounds, agricultural chemicals, styrene monomer, acrylonitrile, plastics of every kind—the list is pages long and will be longer next month. Half of our sales volume derives from products not even in existence a decade ago.

Monsanto has doubled in size every 5 years since 1926, currently operating at an annual sales rate of \$400 million.

With headquarters in St. Louis, Monsanto operates 5 divisions with plants, laboratories and sales offices from coast to coast, from Canada to the Gulf of Mexico. Monsanto overseas has branches or affiliates in 11 countries.

We are seeking technically trained people who want to build their professional futures with us in Research, Development, Engineering, Production, Sales, Staff and Administration.

Where Creative Chemistry Works Wonders for You.



PLACEMENT AND RECRUITMENT NEWS

Continued from page 33

elementary teacher and of young people preparing for high school teaching in agricultural education, art education, business education, English, history and social studies, home economics, languages, music, physical education, science and mathematics, speech and speech correction, and the related fields of occupational therapy and recreation leadership.

"The fastest growing national enterprise today isn't industry, commerce, or even national defense—it is the education of children," the authors point out. "Rising school enrollments brought about by the increased birth rate have created a need for well-qualified teachers, at all age levels, in all fields. The shortage is nationwide.

"Salaries for teachers have risen steadily with the increasing enrollments, and they will continue to rise. Incomes will be higher for teachers whether they plan to stay in the field until retirement, or plan to teach just a short time. The teaching profession is an excellent choice for men—professional status equals that of doctors, lawyers, and other community leaders. It is a good choice, too, for women.

■ Dr. James R. Killian, Jr., president of Massachusetts Institute of Technology, has announced the appointment of Dr. James G. Kelso, a member of the faculty, as his executive assistant.

Dr. Kelso, who was appointed placement officer for M.I.T. last summer, has been succeeded in that position by Joe Jefferson, former assistant director of student aid. Dr. Kelso succeeds Malcolm G. Kispert, recently appointed assistant chancellor.

"Because of his broad experience in the academic field and in dealing with students, with industry, with government, and with research agencies, Dr. Kelso is particularly fitted to assist in the multiplicity of matters coming up in the president's office," Dr. Killian said. "His service to the Institute has been very important and I shall continue to rely upon him."

Mr. Jefferson, the new placement officer, was born in New York and was graduated from Columbia University in 1947. He served in the business training program of General Electric Company, was assistant director of the Otilie Home for Children in Jamaica, N.Y., was director of the Big Brother Camp in New York, and then was a staff assistant of the College Entrance Examination Board in New York. He came to M.I.T. in 1954 as assistant to the Director of Admissions and became assistant director of student aid later that year.

■ "If you are miserable eight hours a day, plus your time going and coming from work, there aren't enough hours left to be happy in."

Thus did Professor Leonard Goodstein stress the key role of employment satisfaction in a man's life before the Conference for Employment Service Counselors at the State University of Iowa.

Important in the total adjustment picture of the individual, the SUI psychologist said, is a job which gives him a sense of status and achievement from his own, his family's, and his community's points of view.

Unless employment success oc-

curs, all other kinds of therapy may fail, he emphasized.

Even though Iowa's mental health facilities are "on the upturn," Dr. Goodstein continued, it is still difficult for the emotionally disturbed to get adequate professional help. But employment counselors can often be helpful to many by guiding them toward occupations in tune with their skills, experience, and interests and sometimes by just providing a sympathetic listening environment, he suggested.

Too often, he said, "we tend to give one of two typical reactions to a person who comes to us with a problem." One reaction is "You think you have problems—let me tell you about mine!" The other is "I just had a client—or a friend—whose problems would dwarf yours," he said.

Such reactions are very little help to somebody who may most need to have an open and candid discussion with a sympathetic listener, Professor Goodstein noted.

He said that often the counselor ought to do a great deal more listening than talking in the employment office because he simply doesn't know enough about the tasks, the working environment, and the opportunities within the many occupations of modern times.

"Most people are aware of the personality quirks which are causing them employment difficulties, and they probably know a great deal more about their kind of work than the counselor does, unless the latter's background has been unusually rich. Sometimes the client can work out solutions simply by talking through his problems," he pointed out.

■ Deciding that you've got to get the job before you can get the job done, Southern Illinois University's School of Business has begun a series of student

"seminars" on how to win interviews and influence interviewers.

In a group of informal sessions called "Your Job Opportunities and How to Use Them", SIU upperclassmen majoring in business and economics are shown what goals to go after and how to score when they get there. A highlight of the meetings, which

SIU'S Interview Suggestions

DO

Know about the company, including location, growth, size.

Have school grades, attendance and activities records available.

Have recommendations.

Have reason "why you chose this company."

Be definite about salary expected.

Have an idea about your future development.

Shake hands.

Dress neatly and look sharp.

Look at interviewer and speak clearly.

Follow instructions.

DON'T

Be flip, ridicule school, or knock instructors.

Be sloppy.

Smoke or chew gum.

Mumble.

Let your mind wander.

Be coy or evasive.

Overemphasize salary.

Make excuses.

Be a name-dropper or string-puller.

Be cynical or dogmatic.

Fail to ask questions.

sonnel, sales and public relations positions in a dozen midwestern industries before joining the SIU faculty in 1955, plays the part of a graduate seeking permanent employment for the first time. Ralph Bedwell, director of Southern's Small Business Institute, "interviews" him twice: first as a clean and crew-cut go-getter who answers questions with crisp forthrightness; next as a Joe-college jester who will obviously foul out his first trip to the plate.

Hastings and Henry J. Rehn, dean of the School of Business, say slipshod conduct at interviews is blackballing many otherwise qualified job-candidates. Hastings presents them with an advance list of interview "do's" and "don'ts" designed to smooth the road to the personnel office:

■ In a world expected to double its population and increase its energy needs eight-fold by the turn of the century, "massive requirements" for technically trained persons are "just over the horizon," Dr. Howard L. Bevis, chairman of the National Committee for the Development of Scientists and Engineers, says. The committee was appointed by President Eisenhower last April to study the "current shortage" of scientific manpower and take steps to alleviate it.

Dr. Bevis, who retired last August as president of the Ohio State University, noted that the present need for scientists is coupled with "a shortage of well trained teachers in the sciences."

Surveys following World War II led to a prediction of a surplus, rather than a scarcity, of scientific manpower, the speaker said. He attributed the present situation to the following factors: (1) rising industrial technology, spurred by many wartime developments; (2) emphasis on science in modern warfare, accounting for employment of 40 per cent of the nation's scientists and engineers in military research and development, and (3) the "aggressive posture" of Russia.

also include lectures on proper career selection, use of the school's Placement Service, management opportunities, and preliminary correspondence, is a how-to-do-it skit on the job interview itself.

In the skit, Willmore B. Hastings, who held top level per-

"The revolutionary role of science in modern warfare has added a further heavy load upon the supply of technological manpower. Forty per cent of our scientists and engineers are engaged in military research and development. Military demands have been accentuated and dramatized in the past ten years by 'cold war' and Russia's aggressive posture. The Kremlin's recent change to tactics of economic penetration has shifted, but not lessened, the emphasis on scientific manpower.

"Even if there were no Russia — no plan for world communism — our nation would still be confronted with the need to maintain its technological leadership in the expanding, almost explosive world in which we live.

"The age of technology is just beginning. World population is expected to double by the year 2000. World energy requirements will have increased eight times by 2000.

"Among the under-developed nations, at the threshold of their technological development, there is a growing insistence on sharing in the benefits of technology and enjoying a rising standard of living. Even in the United States, the use of technology in industry, business, education, and all the varied aspects of everyday living is just gathering momentum.

"Our industrial society is consuming the world's natural resources at an ever-increasing rate. We must turn more and more to technology to create new materials, develop new sources of energy, and maintain the flow of minerals, chemicals, and raw materials.

"Technology generates its own needs for more scientific manpower. Technological growth creates a demand for scientists and engineers. And these scientists and engineers, as they break through to new discoveries and new techniques, set off a new cycle of technological advance.

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The Burroughs Corporation is a worldwide leader in the manufacture of business machines, electronic

computers, data processing systems and other electronic equipment for both industry and defense.

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SALES REPRESENTATIVES! Men with a good educational background in almost any field are eligible for consideration for a special and interesting kind of sales career with us. The Burroughs man analyzes before he recommends. He is not preoccupied with the selling of business equipment as such, but with the particular need of his clients. His ideas for helping them come first. The business equipment simply implements those ideas.

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Promotion from within. Plenty of opportunity for advancement. Good salaries, sick benefits, group and

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Burroughs manufacturing, research, and sales facilities are global in range, including plants in Windsor, Ontario, London and Strathleven, Great Britain, and Paris, France. Here are our U.S. locations:

Home Office: Detroit, Michigan

Research Center: Paoli, Pennsylvania

Manufacturing Plants: Burroughs Corporation, Detroit and Plymouth, Michigan

ElectroData Division, Pasadena, California

Control Instrument Company, Brooklyn, N. Y.

Electronic Instruments Division, Philadelphia, Pa.

Electronic Tube Division, Plainfield, N. J.

The Todd Company, Inc., Rochester, N. Y.

Branch Sales and Service Offices in principal cities throughout the United States.

How we can serve you

Representatives of the Burroughs Corporation periodically visit college campuses for interviews. For information regarding the date of their next visit to your college, so you can inform interested men, just write Personnel Division, Burroughs Corporation,

6071 Second Avenue, Detroit 32, Michigan. Or call the employment officer of our branch, plant or subsidiary nearest you. We will welcome further inquiry regarding the several types of career opportunities that are now available at Burroughs.

EDUCATIONAL TESTING SERVICE

Continued from page 29

Most of the visitors will have some knowledge of tests and their uses although many of them will be surprised at the scope and variety of activity in this unique organization.

The man in the street, however, is little aware either of the work being done at ETS or of the value of testing in general. The occasional article he reads in popular magazines often puts testing in the role of an amusing parlor game. The average student accepts tests as a necessary evil and some may even think of them as barriers rather than aids to their own progress.

Yet this concept is far from the actual fact. For scientifically prepared tests serve to discover and emphasize individuality rather than to standardize, and actually help to bring about the full development of each individual in his own unique way.

Tests Have Two Purposes

Tests are used basically for two main purposes: the prediction of the individual's future performance and the measurement of his past accomplishment. When the user of tests is looking forward and attempting to predict, tests serve as one important tool for guidance of the individual or may assist in selecting individuals for further education or for jobs. When the test user is looking backward, tests serve to evaluate the mastery of particular knowledges and skills and hence may help determine placement. Tests are of many different kinds, each designed to measure particular qualities. Thus the scores of an individual in one test may vary considerably from his scores in another test. The leaders in the field of scientific testing are and al-

ways have been the first to warn the layman about the limitations of tests. However, when good tests are used properly they substantially increase our understanding of an individual's potentialities.

A newcomer to the field of testing might first be interested in learning about how tests are made. This is, as he might imagine, a complex process involving the efforts of many types of specialists — subject-matter experts, statisticians, educational research specialists, etc. — who are constantly engaged in devising new methods and refining existing techniques. At ETS, for example, the Research Division conducts a program of research in psychometrics which lays the theoretical foundation for better measurement. Personality research is exploring better group methods for understanding the qualities that contribute to personal effectiveness. Studies for educational and government agencies and for business and industry, conducted under special grants and contracts, provide new approaches for the appraisal of individual capacities.

When tests in new areas are called for by special educational needs, this division may explore new techniques that could be used. Often, however, actual tests come into being at ETS in the Test Development Division.

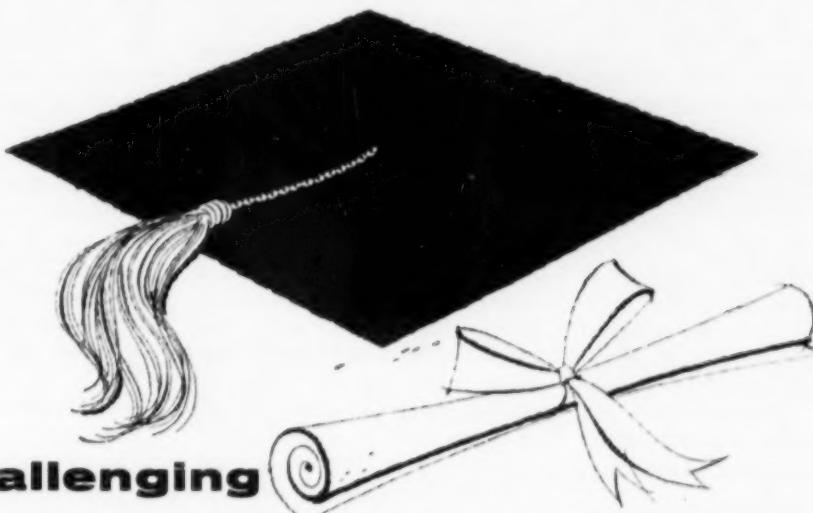
A stroll through these offices will dispel any notions that a test maker is a long haired individual with a permanently acid expression. Visiting in the cheerfully painted rooms of this large division would disclose a group of amiable people with broad interests, whose luncheon conversation is just as likely to

be a heated argument on the merits of the Brooklyn Dodgers, as one on more erudite subjects. Their training has usually been a master's or doctoral degree in one of the various subject matter fields such as science, mathematics, social studies, languages, and the like. Most of them have had teaching experience ranging from a few years to a great many, in elementary, secondary, or schools of higher education. In each subject-matter area, an assistant with an undergraduate degree in the particular subject-matter aids in assembling and reviewing their work.

Director Arranges Programs

How do they go about making up a test? Many of the tests prepared and assembled at ETS are actually ordered, on a contract basis, by an outside educational organization. The Medical College Admissions test, for example, is produced for the Association of American Medical Colleges. Specifications for the test, the fee to be charged to the applicant, the method of score reporting, the dates and places of administration, and many other details are worked out by a committee from the Association of American Medical Colleges with an ETS Program Director. He sets up internal arrangements with various ETS Divisions including the Test Development Division, the Division of Statistical Analysis, and the Division of Test Administration. Representatives of each of these divisions will probably sit with the committee from time to time. The Research Division which is constantly experimenting with new testing techniques often provides fresh approaches to the problem.

When specifications have been set up, the Test Development Division takes on the task of preparing the actual test material. The scope of the examination is broad and will include general aptitude as well as achievement areas. Thus the



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None of the exciting technical promises for the future can come true without parallel developments in many fields. And the field of *special steels* is especially important—for almost everything that's made is either *made of* or *made by* a special steel.

Crucible is the nation's foremost producer of special steels, including tool and high speed, alloy and stainless, magnet and spring, and many, many others. Also, through its affiliates, Crucible produces titanium products and vacuum-melted alloys—products whose modern applications have only scratched the surface.

Crucible is a fully-integrated company, owning its own sources of coal and ore, river transportation and production equipment—as well as one of the finest national distribution systems in the industry.

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- . . . Accounting for:
- Metallurgists
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first name in special purpose steels

Crucible Steel Company of America

writing of a test may require the work of a variety of test specialists from the Social Studies Section, from the Mathematics Section, from Science, Humanities, and perhaps the Language Section.

However, not only the regular staff of ETS prepares actual test materials. For many tests and programs each of the special sections works in conjunction with teachers from the field. For example, a committee of science teachers will be called in to work with the ETS science staff, thus assuring that the tests will reflect current educational thinking and practices.

After the preliminary test questions have been written, the Statistical Analysis Division plays an active role in the steps that follow. Questions are studied to see that they differentiate between good and poor students and that their difficulty is appropriate for the students who will take the tests. Other statistical techniques are employed to insure that the test yields dependable scores, and, if the test is to be used to predict academic success, to be sure that it does. Still other work involves summarizing the test results of large numbers of students so that an individual's performance may be compared with that of other students who have similar background and/or educational goals.

Cooperative Division Publishes

The work of these divisions is not limited solely to the development of materials for contractual tests and programs. The Cooperative Test Division also calls upon their services.

This Division, a test publishing unit within ETS, prepares and sells tests directly to schools and colleges all over the country. To insure that these tests meet varied educational needs, the Cooperative Test Division staff, drawing upon all the resources

of ETS, edits the materials, develops and provides direct assistance to users in selecting and using the tests themselves. On its staff are editors with advanced study in tests as well as educational experience, assistants who have undergraduate majors in English, and a number of general administration personnel.

The original staff of ETS of less than two hundred has already increased to five hundred including those of its West Coast office in Los Angeles. Although growth was inevitable because of the increase in student populations and in the use of tests, ETS has taken on both additional testing programs and additional educational services.

Among the latter is the Sponsored Scholarship Service which administers such well known programs as the National Merit and the General Motors Scholarship Programs, as well as some hundred other scholarship programs of varying size. Candidates who receive scholarships under these programs are selected by committees appointed by the sponsoring organizations. ETS assists in the administration of the programs, whether they are of national scope or restricted to two or three scholarships offered to children of employees of a company.

To assist the selection committees, a File Folder Service of the Scholarship Service Department gathers materials such as school records, recommendations, and the like, which are used in conjunction with test scores, in determining who should win scholarships. The department also provides services to help colleges and other scholarship donors to evaluate an applicant's ability to finance his college education.

To keep alert to the needs of education, ETS seeks the advice of many committees representing all types of educational situations in all parts of the country.

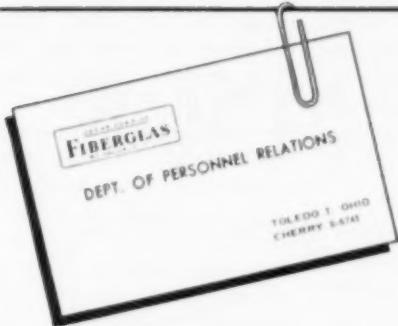
Major policy decisions regarding ETS and its educational services are made by its Board of Trustees which consists of university and college presidents, heads of secondary school systems, other educators of wide experience, and leaders in industry. Still others serve on committees that advise ETS on the specific measurement needs of high schools, colleges, graduate schools, and businesses as well as on broad research and psychometric techniques.

Educators Provide Cooperation

A tour through the building during certain times of the year would permit a visitor to see additional ways in which educators cooperate with ETS. For example, one might see some of the 250 to 300 teachers grading essay tests in the fire house adjacent to ETS which is used because of inadequate space in 20 Nassau. Students would be somewhat startled to see their anxiously composed essays spread out on the firemen's billiard table under the polished and protruding headlights of Princeton's Station No. 3 fire engines.

Arrangements for these readers are made by Test Administration, the largest division of ETS. It is here that the student's application for a particular test is received, routed by mail readers to the Registration and Reports Department, coded for the colleges to which scores are to be reported and for the center to which the student will report. Enough intricate operations are carried on to bewilder anyone but a systems analyst. The right number of examination papers must arrive on time at the right examining center.

The office of Centers and Supervisors, its walls hung with pin-dotted maps, arranges for locations and supervision of the actual tests, not only in the United States, but throughout the world where G.I.'s or other U.S. citizens or foreign students



*To our Associates
in the Field of
College Placement*

A Progress Report on A Decade of College Recruiting

A LOOK AT THE RECORD

Just 17 years ago saw the inconspicuous birth of a new corporation in an abandoned factory in central Ohio. Just two rigid foundations supported the infant industry (1) a unique but undeveloped discovery—fibers made of glass and (2) a small group of imaginative young men. The combination paid off for Fiberglas. From sales of \$1,000,000 from a limited number of products in 1938 to a corporation that produces a glass fiber that highlights thousands of products applications and creates net sales of approximately \$150,000,000 a year. This has been the gigantic growth of Fiberglas.

ABOUT THE FUTURE

And this is just the beginning of the Fiberglas growth story. Fiberglas has barely tapped its market and production potential. It's true that Fiberglas offers unlimited opportunities for your graduates in all fields of science, engineering, automation, marketing, distribution, accounting, planning and business administration. Furthermore, summer employment opportunities in research, product development and engineering will be open to both college undergraduates and faculty members. But above all we look to your graduates as opportunities for us.

EMPHASIS ON YOUTH

We need capable young men to meet the challenge of an unlimited industry. We need more men of the caliber who pioneered and now direct our corporation. Men, who can overcome obstacles, frequent disappointment and even a few failures. Our progress became possible through the youthful enthusiasm, determination, zest for getting things done and capacity for long hours and hard work of the Fiberglas "young men". You can give us more such men. You've done it in the past decade.

In our 10 years of organized recruiting, some 600 inexperienced college graduates have been brought into the Fiberglas organization. Many of these are already in a position of major responsibility, and contributing further to the progress of our business. It was through your aid that we met these men.

A decade of recruiting experience shows clearly that our country's colleges and universities and their placement officers have played, and will continue to play, a major role in the growth and expansion of the Owens-Corning Fiberglas Corporation. We are happy to have this opportunity to express our thanks.

may wish to take qualifying tests. Arranging for these administrations involves correspondence with about 2,000 supervisors all over the world, a group composed of teachers, superintendents, missionaries, and U.S. consulate and Embassy officials. ETS incoming mail is a stamp collector's delight.

After the tests are administered, answer sheets are returned, are scored by hand and by machine and an intricacy of IBM equipment including an electronic computer reduces the wealth of detail to usable sim-

plicity. Yet like the apparently tangled mass of colored wires behind a telephone switchboard, each process can be traced back to the individual student so that his final score reaches the colleges of his choice on time.

These are but a few of the intriguing activities that suggest ETS as a stimulating atmosphere for a career. But there are other rewarding aspects. The officers and trustees of ETS have been liberal in providing benefits for staff members, including life insurance coverage, a comprehen-

sive medical program, and a generous annuity plan with the Teachers Insurance and Annuity Associations. The growing community of Princeton, with its concentration of educational and research institutions, offers a stimulating environment to the expanding staff of Educational Testing Service. When its handsome new buildings are completed on several hundred acres of farm and woodlands at the outskirts of the town, ETS looks forward to providing a continued and increasing service to the field of education.

PHARMACOLOGY AS A CAREER

Continued from page 17

to study constantly or get out of date very rapidly. It is a full-time, round-the-year job. Scientific journals in many fields have to be read continuously.

For those who go into a pharmacology department after a bachelor's degree education, there is always on-the-job training to develop them into qualified technicians in the use of certain techniques. However, without the tremendous broadening background which comes as a result of three or four years of graduate study, one cannot hope to carry on independent problems in the field of pharmacology.

Primarily, pharmacologists work with animals—monkeys, dogs, cats, rabbits, guinea pigs, rats, mice, hamsters, and even roosters and pigeons. Veterinary pharmacologists work with all the various types of farm and range animals as well. In studying the properties of a potential new drug, they measure the "drug's" effect upon blood pressure, pulse rate, arterial blood flow, gastric motility, absorption, excretion, and a myriad of other

physiological functions of the body.

Pharmacology is still a young science, and much time is still devoted to devising better methods for finding new substances having specific sought-for activities. This frequently involves devising intricate new equipment, employing all the latest electronic devices. Pharmacologists also have to study the actual nature of many diseases in order to determine what type of drug might be effective.

Need Specialized Techniques

A more biochemical aspect of pharmacology, but still an important part of the science, is to determine how the body carries out the chemical degradation of that portion of the drug which it does not excrete as such. This also involves many very specialized techniques, including the use of radioactively labeled drugs. In short, pharmacology is a field which will challenge the intelligence and imagination of any budding scientist.

Most large universities and all medical schools have depart-

ments of pharmacology which are well staffed with pharmacologists with varying amounts of training and experience. These pharmacologists are the teachers and serve as the fountain for scientists who will go out to work in other positions. Probably the largest employer of pharmacologists, however, is the pharmaceutical industry.

Some pharmaceutical companies have departments with as many as 100 people working, of whom a quarter may be pharmacologists. These men and women are the ones who determine the biological activity of substances submitted to them by the chemists. They determine what the compounds will do, how they act, whether they are safe (and under what conditions). It is impossible to develop new drugs for man or animals without their services.

Finally, many pharmacologists find employment in the research laboratories of the government and other non-commercial research laboratories and hospitals (such institutions as the Rockefeller Institute and the Sloan-Kettering Foundation).

Salaries paid to pharmacologists are among the highest in the field of science. This is particularly true when the man has an M.D. degree in addition

WANTED: Graduates who are eager to help Shell answer questions like these

How can we get a better picture of underground formations without test drilling?

How can we improve our knowledge of ocean floors, and of the formations beneath them?

Are there ways to reduce the high — and still rising — cost of drilling?

Once an oil-bearing formation has been found, how can we recover a larger percentage of the oil that's in it?

How can new techniques help Shell Chemical produce and market its products more efficiently?

How can more effective use of agricultural chemicals be made to produce richer crops in shorter growing seasons and with fewer man-hours of care?

Will new developments in instrumentation make possible pipe lines that run themselves?

How can we improve the quality of petroleum products?

What is the best way to increase the high-octane gasoline yield from heavy crude oils?

What happens to lubricants in a plane approaching the "heat barrier"?

Where will the more concentrated sources of energy for tomorrow's aviation fuels be found?

How can we help the independent businessmen who operate Shell service stations increase their sales and profits?

—and many more!

These questions cover a lot of ground, don't they? Well, so does Shell. And so do the graduates we're looking for. As you can see, there's lots of work to be done. We're going places at Shell. Some of today's graduates will get the chance to come along

and help. You'll find more details in our booklet "Opportunity with Shell," which is available now through your campus placement office. Shell Oil Company, Personnel Department, 50 West 50th Street, New York 20, New York.

SHELL OIL COMPANY

SHELL CHEMICAL CORPORATION



SHELL DEVELOPMENT COMPANY

SHELL PIPE LINE CORPORATION

to his Ph.D. At the present time, a pharmacologist with a Ph.D. only and with no subsequent research experience can expect a beginning salary of about \$650 to \$750 a month in the pharmaceutical industry. If he has an M.D. degree in addition to his pharmacology work, he can expect a definitely larger salary, the increased amount being somewhat indeterminate.

A master's degree in pharmacology will draw about \$450 to \$500 per month. There is no such thing as a bachelor's degree in pharmacology, but biology majors can expect \$325 to \$375 a month if they are working in the field of their major. The figures quoted above are for men. For various reasons, which are beside the point for this discussion, women command lower salaries.

Salaries quoted above are also "as of 1956"—a period with a definite shortage of pharmacologists. When the universities catch up with the supply situation and more pharmacologists become trained and available, these salaries will drop back to the levels paid other scientists—such as chemists and bacteriologists. This is about 10% lower. The law of supply and demand is as important a principle in the hiring of people as it is in the buying of commodities.

It is impossible to emphasize too strongly the importance of advanced degrees in the field of science. As a rough average, master's degrees will draw about \$75 a month more salary than bachelor's degrees, and a Ph.D. degree about \$200 a month more. Simple mathematics will prove that, for a person with the intellectual capacity to qualify for a Ph.D. degree, the time and money put into acquiring that degree represents the best investment a man can ever make.

The three to four years of graduate work required for the advanced degree will cost a single man somewhere between

\$5,000 and \$10,000. A large proportion of this can be earned along the way in the form of fellowships and teaching assistantships. Many graduate students pay all their graduate school expenses in this way.

For this investment of \$5,000 to \$10,000 what does a man get? Financially, he receives an

JOURNAL COVER SUBJECTS

Member firms and placement officers of the several associations are invited to submit subjects for JOURNAL covers.

Business or campus scenes without prominent identification factors and in full color will be considered. They should equal the size of the color illustration on this issue or be capable of being cropped to that size. Original plates or electros must be provided on request.

extra compensation of about \$2,500 a year—for the rest of his life! He gets the cost of his advanced degree back in two to four years and for the rest of his life is on a permanently higher salary level. No other investment of similar proportions can return so much. This is only the financial side of the picture however. There is a further, more important aspect to it.

The person with a bachelor's degree can subsequently act as a pair of hands or a technician for the person who plans and executes the research project. While it is true that a few very exceptional people advance out of this technician stage to that of real research work, it takes a person of tremendous capacities and perseverance plus a little luck to do so. In contrast to this picture, the training for the Ph.D. degree is that of training in the methods of research. At

the same time one receives a broad technical and scientific background in fields related to the major subject. For people so trained there is an unlimited ceiling for advancement and promotion. The sky is the limit! This is the immeasurable value of the advanced degree.

Degree is "Union Card"

In earlier days, the Ph.D. degree was regarded as being more or less in the class of an honorary degree. Today, in most fields of science, it is nothing more or less than a trade degree—a "union card" without which it is exceedingly difficult to get ahead. It is therefore urged that every student with the intellectual capacity to acquire an advanced degree be urged to take that path. It has tremendous advantages—and all it requires is courage and fortitude.

The pharmacologist occupies an important place in today's community. New drugs and many new advances in medicine are impossible without it. This profession is not only an honorable and necessary one, but calls for the utmost in intellectual capacity, ingenuity, and drive. Life in a university community needs no elaboration. It is less well understood, however, that life in a large industrial research organization has very much the same caliber. Many an ex-professor has found happiness and satisfaction surrounded by other able scientists educated in his own as well as other branches of learning. There is the same or even a greater drive to make worthy contributions to progress. The result is that, all-in-all, one finds most of the desirable characteristics of the university atmosphere in an industrial research institution.

Suggest pharmacology to that intelligent young person who is interested in making a very real contribution to the field of medical science!

*Graduates in engineering, physics,
applied math., allied sciences:*

You can do much better than a "standard" career today!

Careers, like cars, come in various models. And nowadays such things as security, adequate compensation, vacations-with-pay are not "extras" any more—they're just "standard equipment"!



MISSILE DEVELOPMENT

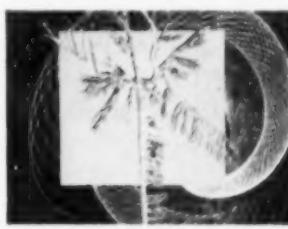
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Alabama

HOWARD COLLEGE, Birmingham—William D. Murray. Interviews: Anytime during second semester.

SPRING HILL COLLEGE, Spring Hill (Mobile)—Francis X. Carberry. Avoid: December 20-January 3, January 20-February 3, March 27-April 4, May 25-30.

California

CALIFORNIA STATE POLYTECHNIC COLLEGE, San Luis Obispo—Eugene A. Rittenhouse, Placement Officer.

Florida

FLORIDA STATE UNIVERSITY, Tallahassee—Mrs. Margaret Blair, Acting Director, Vocational Guidance and Placement. Interviews: Oct. 1-Aug. 9. Avoid: Dec. 20-Jan. 2, Jan. 8, Jan. 24-Feb. 7, April 18-22, May 24-June 19.

Illinois

OLIVET NAZARENE COLLEGE, Kankakee—Paul L. Schwada, Director of Placement. Interviews: Oct. 1-May 20. Avoid: Dec. 19-Jan. 3, Jan. 14-18, April 12-22.

THE UNIVERSITY OF CHICAGO, Chicago—School of Business: Harold R. Metcalf, Dean of Students; Mrs. E. A. Sutherland, Placement Officer. Interviews: Appointments made in advance and University will avoid scheduling on dates when students are not available.

Iowa

IOWA STATE COLLEGE, Ames—Prof. R. M. Vifquain, Agricultural Personnel Officer. Avoid: December 15-January 9, March 16-April 3, May 16-19, June 8-20.

Kansas

MCPHERSON COLLEGE, McPherson—Prof. Merlin Frantz. Interviews: January 28-May 20. Avoid: April 12-23, May 17.

Kentucky

UNION COLLEGE, Barbourville—Milton H. Townsend, Director of Public Relations; Mrs. E. S. Bradley, Secretary.

Louisiana

TULANE UNIVERSITY, New Orleans—Johnie Branch, Placement Officer. Interviews: October 22-March 15. Avoid: December 21-January 6, January 21-31.

Supplementary listing of

Placement Offices

Additions to the index published in the October issue.

Massachusetts

BENTLEY SCHOOL OF ACCOUNTING AND FINANCE, Boston—Philip S. Gardner, Placement Director. Interviews: February 1-May 1. Avoid: March 23-31.

Michigan

ALMA COLLEGE, Alma—Harlan R. McCall, Director of Placement. Interviews: November 1-May 28. Avoid: December 19-January 2, January 23-February 4, April 13-22, May 22.

HOPE COLLEGE, Holland—Albert H. Timmer, Director, Placement Bureau. Interviews: Oct. 15-May 14. Avoid: Dec. 18-Jan. 4, Jan. 21-30, March 28-April 10.

Mississippi

MISSISSIPPI SOUTHERN COLLEGE, Hattiesburg—Dorothy Lenoir, Director of Placement.

Missouri

SOUTHWEST MISSOURI STATE COLLEGE, Springfield—Mrs. Mary Robinette, Director of Placement. Avoid: Dec. 21-Jan. 7, Feb. 25-March 8, May 20-31.

New Jersey

RUTGERS UNIVERSITY, The Newark Colleges, Newark—Ned J. Doyle, Director of Placement. Correction—Interviews: January 15-April 15. Avoid: January 15-26, March 23-April 1.

New York

COLLEGE OF MOUNT SAINT VINCENT, New York—Mary J. O'Donnell, Placement Director. Interviews: February 15-April 10. Avoid: April 17-28.

SYRACUSE UNIVERSITY, Utica College, Utica—Ronald Ley, Director of Placement. Interviews: October 15-January 18, February 11-May 17. Avoid: December 24-January 4, April 17-26.

North Carolina

CATAWBA COLLEGE, Salisbury—Millard F. Wilson, Director of Placement Office. Interviews: Sept. 14-May 15. Avoid: Dec. 15-Jan. 3, March 30-April 8.

Ohio

WESTERN RESERVE UNIVERSITY, Cleveland—Mrs. John A. Lebedoff, Director of Personnel and Placement Service. Interviews: October 30-May 15. Avoid: December 17-January 1, January 17-February 6, April 14-21.

Pennsylvania

HAVERFORD COLLEGE, Haverford—Bennett S. Cooper, Alumni Secretary.

LA SALLE COLLEGE, Philadelphia—L. Thomas Reifsteck, Director of Placement. Interviews: October-May. Avoid: January 21-Feb. 4, Feb. 22, April 15-22.

Rhode Island

RHODE ISLAND SCHOOL OF DESIGN, Providence—George L. Bradley, Director of Placement; Ray F. Carmichael, Jr., Director of Public Relations. Interviews: November 1-April 26. Avoid: December 21-January 6, January 21-29, March 29-April 7.

South Carolina

WINTHROP COLLEGE, Rock Hill—John G. Kelly, Registrar and Director of Placement. Interviews: February 15-May 16. Avoid: April 18-24.

Texas

NORTH TEXAS STATE COLLEGE, Denton—E. H. Farrington, Director of Placements; John M. Brooks, Director of Business Employment Service, School of Business.

Wisconsin

STOUT STATE COLLEGE, Menomonie—Frank F. Belisle, Placement Chairman. Interviews: March, April, May. Avoid: April 19-27.

KEEPING UP WITH THE JONESES

Continued from page 27

higher percentage of his seniors placed in jobs each year? Many think so. Does he succeed to the extent that his seniors placed have low turnover in their new jobs? Possibly, but how many directors keep a careful reckoning of graduate turnover? Does he succeed to the degree that he places men in jobs offering the best prospects for success? Probably, but how many placement officers have the time or facility to analyze thoroughly the capabilities of their students and how very few really know the many varying job descriptions of the large number of companies which visit their campuses! Does the placement director succeed to the extent that he increases each year the number of interviewers from different companies?

What Is Motivation?

Does the placement director gain prestige on campus if each year he can point to a higher and higher average starting salary for his graduates? From the publicity given such figures one might think so!

Again, if one keeps his ear to the ground and judiciously questions one placement director about another's report of numbers of successful placements and the level of beginning salaries, he will soon appreciate that too many placement directors are succumbing to the temptation of keeping up with the Joneses! Some reports of numbers placed and salary level to start are far from strictly true. They are approximations of the anticipated or are loaded with wishful thinking or are consciously stretched to keep pace with reports of the achievement of other placement directors. Good place-

ment directors will resent this statement very much and even deny its accuracy. They know they keep accurate records and never exaggerate. Nonetheless, even the best are only human and they too have their pride in vital statistics. They must constantly check the urge to exaggerate.

Some placement directors, it is sad to say, are so immature in their responsibilities or so pressed to produce impressive statistics that they actually publicize to their students certain minimum starting salary figures below which they should not go. They even show their students comparative annual figures in an effort to impress upon them how they, the placement directors, have succeeded in raising student salaries. To the really good and mature placement directors such actions are repulsive and a matter for major concern! One self-centered and very shortsighted placement director even brags that he has used the higher starting salary level for students as a lever with his college president to raise his own salary!

As an aside, it should be mentioned that inadequate remuneration in many instances results in the hiring of college placement directors of inferior quality and lacking truly professional ethics and ability.

Because inadequate faculty prestige and limited operating budgets force the placement director to be constantly on the offensive in selling his services and worth, perhaps we can forgive him for falling into the error of trying to keep up with the Joneses. But what of faculty advisors and the recruiters from

industry? What excuses have they?

Recently, at a placement directors' conference, the head of a department of a large university was overheard telling a recruiter from industry that he would not be permitted to interview any of his students unless he was prepared to meet a stipulated minimum starting salary for graduates! This is an extreme case, but a true one. In fairness it must be stated that that university lacks a centralized, professional placement service. Moreover, this particular department head had failed in business before he sought retreat on the campus. It is obvious that the same traits of impracticality and shortsightedness which caused him to fail in business are no assets to him in education!

Gains Not Related

There are, we hope, only a few but indeed there are some faculty members who think that, if by their advice to students they contribute to circumstances which raise the starting salary levels, they can help their own financial plight. They reason that university administrators cannot help but be impressed by the very small gap between the salaries of recent graduates and those paid seasoned educators. Unfortunately, a mere consciousness on the part of university administrators concerning the inadequacy of faculty salaries is no solution. The presidents of colleges are dependent upon either the largesse of alumni and business corporations or the willingness of taxpayers to part with additional monies for education.

What actually is happening is that industry's salary offers are becoming so much more attractive to college graduates than those of educational institutions that fewer and fewer topflight students are entering the teaching profession. This has produced not only an acute shortage



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THE STANDARD OIL COMPANY (OHIO)

of educators but also a definite lowering in their over-all quality. True, this may produce such a nationwide crisis that something very positive will be done about teacher remuneration, at least so far as the tax-supported institutions are concerned. The independent colleges and schools, however, must continue to look to donations from business as their ultimate financial salvation. If the overhead of businesses is increased by inflation of beginning salaries less money will be forthcoming for education. If taxes for education are increased and increased overhead for business is covered by increased costs to the consumer, the further cheapening of the dollar will put more strain than ever upon the professor's salary.

Salary expense dissipated upon higher and higher salaries for the new and untried in industry means less money available for the salaries of successful keymen in corporations. These are the alumni to whom colleges look for financial contributions. Such men are taking a very dim view of the misguided efforts of faculty members to keep up with the Joneses either through pride of increased starting salaries for graduates of their institutions or the indirect method of stimulating their own salary status by producing contrast of their remuneration with the higher increased starting rates.

Cites Recruiters' Role

If, because of their financial plight, faculty members can be forgiven for their occasional misguided and confusing attempts to keep up with the Joneses, what excuse can we give for the behavior of the representative of industry on campus?

It was a shock to hear at the Western College Placement Conference in San Diego this year accusations and confessions that some shortsighted and unscrupulous corporations were not only paying exorbitant beginning sal-

aries to recent college graduates but that under-the-table bonuses were being offered to seniors to induce them to sign up. It was disappointing to learn that certain misguided individuals in a large and respected corporation inaugurated a procedure to attempt to get students to sign up early by offering to pay half salary until the student actually reported for work after graduation. It is to the distinct credit of that organization that its top officials promptly quashed such tactics when college placement officers and managers of other corporations called the matter to their attention. It is to be expected that this example will deter personnel men of other companies from adopting such unsound practices.

It is fervently to be hoped that today's college graduates are interested in long-range opportunity, that they desire substantial financial rewards for demonstrated performance. Would they be happy at the prospect of fewer and smaller bonuses for future successes as the result of salary funds dissipated in bonuses to neophytes for anticipated performance?

Many companies, especially those using a sizable number of engineers, are finding themselves in a serious dilemma. Beginning salaries have risen so fast that their level pushes uncomfortably close to that of men who have served the companies well for a period of years. These seasoned employees are disgruntled because their own salaries have not moved up relatively. Low morale makes these men look elsewhere for the salary recognition they feel they deserve. Turnover of established employees is on the increase. Companies are sailing perilously close to the *Sylla* of a shortage of new talent and the *Charybdis* of loss of experienced men. This is serious and something definite must be done about it.

Companies must keep up with the Joneses in hiring potential

future management. Of that there is little question. But their personnel men must avoid the superficial keeping up with the Joneses which is prompted by pride. If a company pays more than the going rate or even the highest in its field, is that necessarily something to be proud of?

Recruiters "Cry Havoc"

Unfortunately, some inexperienced and shortsighted recruiters think so. These are the same immature operators who, in their conversations with other recruiters, cannot resist making their top offers sound as though they were average. It would be funny, were it not so serious, to listen to these exaggerators when they distort their own figures, knowing full well they are not telling the strict truth and then in turn gullibly believing their fellow liars' stories and rushing back to their top managements with stories of the frightful competition they are facing. Not only are they foolishly trying to keep up with the Joneses but one wonders whether they are lazy, whether they have ability for their jobs, or whether they lack confidence in the long range opportunities their companies have to offer.

If, because of the dilemma presented by the acute disparity of supply and demand in judgment-potential personnel, we can forgive the industrial recruiter for his shortsighted and almost unethical attempts to keep up with the Joneses, whom then can we blame? Are the parents of the students themselves at fault?

Many parents, particularly those fathers who are themselves successful business men, are gravely concerned about what is happening to their sons graduating from college. Many look back to their early struggles to hold on to jobs in the depth of the depression and realize now, what they did not then, that circumstances were molding their characters and giving them habits

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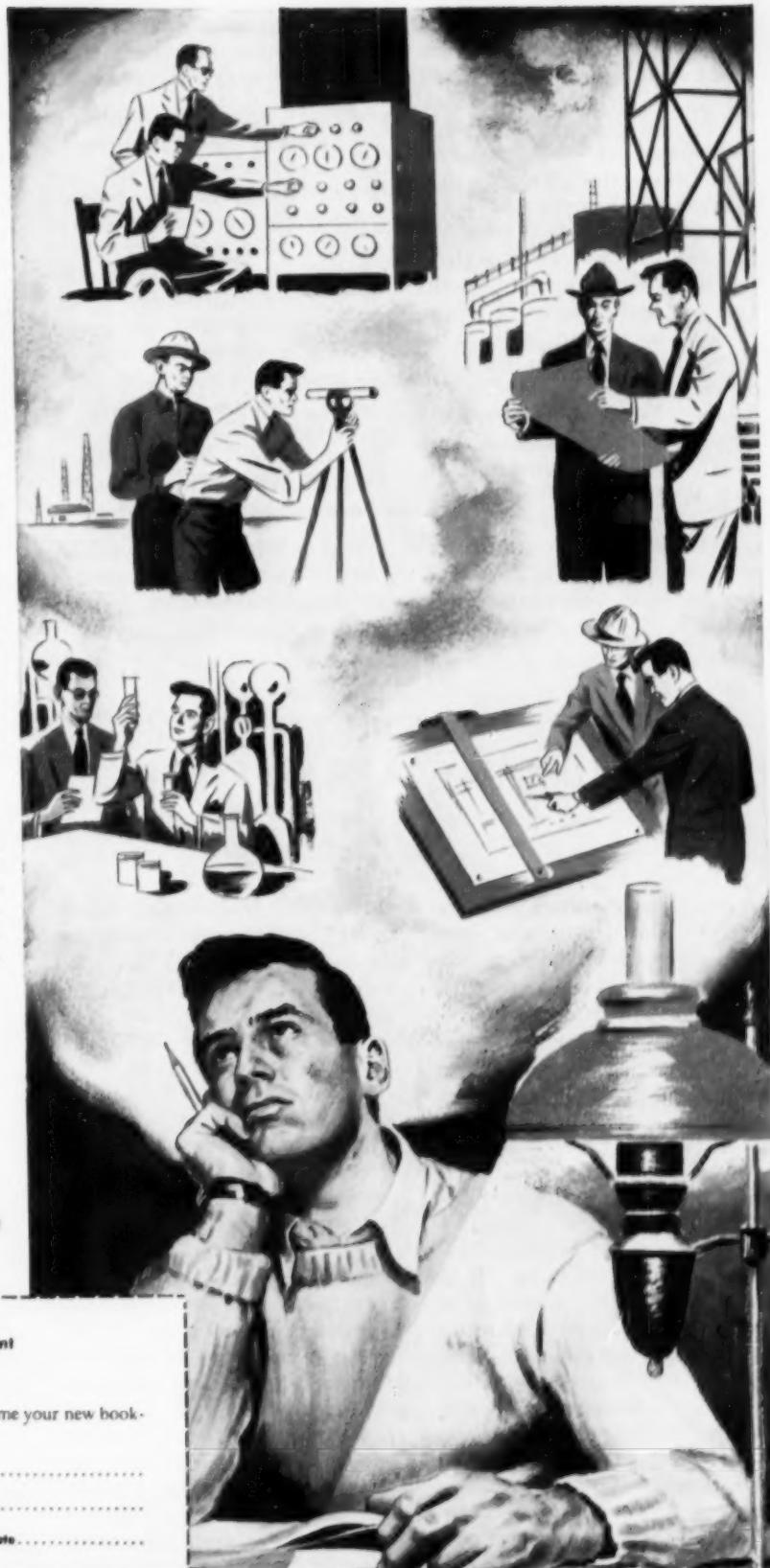
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of industry. Today, instead, their sons have a false confidence based upon a grossly exaggerated opinion of their worth. Money is too easily come by. Family obligations are being assumed long before the youngster has proved himself on the job. Rude awakening and cruel hardship may not be too far over the horizon when manpower supply catches up with demand, which it inevitably will and perhaps no later than the arrival at maturity of the crop of World War II babies. Yes, parents are concerned and rightly so, but even some of these, in an effort to keep up with the Joneses, can be heard bragging about and exaggerating the starting salaries of their sons. True, most of them modestly shake their heads

while they brag, implying that they do not approve the sad state of Johnny's unearned wealth!

Poor Cassandra was doomed by Apollo to have her prophecies ignored by her countrymen. This article will probably produce comparable incredulity and even derisive scorn, but the matter of keeping up with the Joneses in starting salaries for college graduates is a very serious one. Placing the blame on student, placement director, faculty, industry, or parent is relatively unimportant. Probably all, plus the disparity of supply and demand, share the blame equally. What is to be done about it?

In the College Placement Associations there is a meeting ground for placement directors, faculty,

industrial recruiters, and even students. Committees composed of proven leaders from all these groups should be formed and then devote serious thought to the whole problem. Much hair should be let down, blunt words should be spoken, good brainstorming should be exercised and above all the weakness of keeping up with the Joneses must be banished! Workable codes of recruiting ethics should be established and in the forefront of the minds of all must be kept the welfare of today's young college graduate who will tomorrow be in charge of placement, serve on faculties, represent leadership in industry, and himself be that very important person, the parent of the next generation.

HOW BUSINESS GRADUATES FEEL

Continued from page 43

general administrative responsibility? Do the broader contacts involved in Sales or Administrative work stimulate more rapid development?

This study does not attempt to answer these questions, but the data on grades in high school and college suggest another possible explanation for their dissatisfaction. It seems clear that Accountants were better students, both in high school and in their college studies, than other business graduates. It is probable that this greater academic success, together with the considerably greater emphasis on professional preparation which is given to Accounting in the College, has led to development of a somewhat higher level of aspiration for this group. This point of view might also be supported by the findings of one of our previous studies (2), which

showed that both employers and college seniors rated intelligence as the most important factor for success in the Accounting field. If the men in Accounting work are more intelligent than other business graduates, they undoubtedly expect to attain higher levels of achievement and would consequently tend to be more disappointed with average progress and rewards.

Those in Sales work, on the other hand, had relatively low grades in high school and college but in the over-all job satisfaction ratings in Figure I attained the highest mean score. If their low level of academic success was instrumental in holding down their aspirations for the future, the Sales group might well be expected to be better pleased with their later job progress. Since as a general rule most college students tend to obtain

lower grades in college than they did in their high school studies, it is interesting to note, also, that the Sales group is the only one which showed better academic progress in college than in high school. This required greater effort in college, indicating a resolution to do better work. If this carried on into their working life, it might also partially explain why, in another of our studies (3), employers seemed better satisfied with the college men they have hired in Sales than in any other field.

Little can be inferred from this study about the men in Administrative jobs, except that they are moderately well satisfied with regard to most aspects of their work situations. They seem to be least contented with their salary standing, although their reactions toward all other factors are generally favorable.

1. Coleman, Gerald F. "Job Satisfaction of 1948-49 Business Administration Graduates." An unpublished report submitted in partial fulfillment of requirements for the MBA degree at the University of Washington, 1956.
2. Dickinson, Carl. "What Employers Look For in the College Graduate." Personnel and Guidance Journal, April, 1955, 460-464.
3. Dickinson, Carl and Newbegin, Betty. "What Contributes to Job Stability." Journal of College Placement, December, 1955, 25-27.

Careers Unlimited



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Inquire: Mr. S. T. Tooker, Second Vice President, The Travelers, Hartford 15, Connecticut

PORTRAIT OF A FOUNDER

Continued from page 31

His interest stemmed from much earlier association with the national placement problem, however.

"College graduates were still selling apples as late as 1938-39," he says. "The war in Europe began to exert an influence on the picture but it was late in 1941 before we could place engineers. Then, when we wanted them, we had to look behind ribbon counters to find them."

As is well recognized, the years between 1941 and 1951 saw probably the greatest change in the employment picture in our country's history. From a virtual absence of jobs, especially for technically trained men, the war diverted most of the available manpower to the armed forces. The return of peace, the growing demands of civilian employment, the Korean action, and finally the still unmet demands of a burgeoning economy saw the Association grow from a small body of individuals to a national force. During all of these years one man, Gordon Hardwick, guided the destinies of the Association.

Had Natural Enthusiasm

He was prepared for his role by long experience and a natural enthusiasm for personnel work. Born in Iowa, he graduated from the Fort Dodge High School and received his B.S. degree in economics from the University of Pennsylvania in 1916. Employed briefly by the General Chemical Company, he enlisted in the Navy, was commissioned as Ensign two months later, and reached the rank of Lieutenant (jg) at the time of the Armistice.

In 1919 he became associated with the Tubize Artificial Silk Co. where he served for a number

of years before being named as Comptroller of the Penn Mutual Life Insurance Co. in Philadelphia in 1931. Three years later he was named a Vice-President and held this post for ten years. During this period he developed an even greater interest in personnel work as he dealt with Penn Mutual's 1,200 employees including both high school and college graduates.

Because of his accomplishments in the field of investments, he was invited to become Chairman of the Board of Taylor-Brown, Inc., a holding company. Here he attracted the attention of the distinguished investment brokerage firm of Montgomery Scott & Co., which he was invited to join as a partner. Although now retired, he continues to maintain an office there and to visit the firm regularly.

In his rise through successively more eminent positions in business, the JOURNAL shared his offices and the editors accompanied his moves while the University of Pennsylvania provided for the bookkeeping of the Association.

Indeed, if the University had exerted a benevolent influence over the Association in its early years, it had done no less for Gordon Hardwick and he, in turn, had reciprocated. President of the General Alumni Association from 1940-42, he is now president of the Board of Managers of the Graduate Hospital of the University, an Alumnus Trustee, and a member of the Trustees' Committees on Medical Affairs, Development and Public Relations, and Business Education. He also serves on the Advisory Council on Athletics—a something less than enviable post until the Univer-

sity's drought of football victories came to a recent end.

So, as Gordon Hardwick's responsibilities grew, did the functions of the Association. The JOURNAL had begun in October, 1940 as the Journal of the Pennsylvania Association of School and College Placement. By the next year it had dropped the "Pennsylvania" and had become national. Then the emphasis on "school" began to wane. While the colleges developed greater enthusiasm for placement, the secondary schools became satisfied with placement as it existed at their level.

Series of Editors Followed

In 1942-43 Virginia Stites was editor and during her term the office was moved from the University to the Penn Mutual Insurance Co. Peggy McGee followed as editor with volume five and Anne B. Jones succeeded her briefly before Ida Landenberger served the longest term through the 10th Anniversary issue and to the editorship of Parker Enright in October, 1953. By this time the editorial office had been moved to the Fidelity-Philadelphia Trust Building where the firm of Montgomery Scott & Co. was located. It was only with the retirement of Mr. Hardwick and the appointment of Robert T. Addis in 1954 that the JOURNAL office moved to separate rooms on another floor of that building.

Nor was the JOURNAL the only function of the Association that prospered under Hardwick's guidance. When the Association of School and College Placement was formed, the Eastern College Placement Officers had the only other organization of the kind. The president of the Association was of an evangelical turn, however, and it was not long before he was fostering associations in the Middle-Atlantic area and west to the Pacific. It may be an eye-opener to many who have joined regional associations in

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later years to note that the first Western meeting was held as recently as January of 1951. It was Hardwick, closely followed by the enthusiastic and capable Craig Sweeten, who sponsored many of these first meetings of the new regional associations.

Most people, relaxing in retirement, would be tempted to philosophize. Gordon Hardwick sitting here on the spacious front porch of "Grenloe" has every right to do so but he is not of that stripe. There's a hard core of reality in his thoughts concerning placement today as there has been in a lifetime of concern on that score.

"I'm not sure," he says, "how much credit we can take for circumstances as we find them when the placement officers and their graduates are sought out by talent-hungry employers. Might it not be advisable for us to prepare for the time when the shoe will be on the other foot — when there will be an abundance of unemployed graduates and

no war service to bolster the situation.

"In every instance since 1941 when there has been a tendency toward a slack in employment, a war has taken up that slack. It is only realistic to suggest that we become prepared to do a better job of selective placement against the day when no such artificial solution is at hand.

"There have been appreciable gains. We have tried to seek the acceptance of the placement function. Back in 1940 there were a dozen or so full-time placement officers and even they had this, that, or the other title. Now placement officers are accepted and in many instances sit in on administrative councils because of recognition of their contributions to the public relations angle. There are equal dangers, however, in the inducements made by business and industry to the placement directors. Unless the colleges and universities become aware of this and take appropriate action

there may be a terrible dearth of qualified placement people.

"There are those," he adds, "who make a great point of achieving distribution in placement. I'm not at all sure that it is wise to try to get boys from every state. It might even be best to direct students to employment in the communities from which they have come. Otherwise you break up local loyalties and when you do you really lose something. To some extent, wide-spread industries are already recognizing this and acting upon it."

Gordon Hardwick is also one to counsel the initiating of the placement function as early in the student's life as practicable.

"I have long fought for the recognition of the placement function in light of its true value," he concludes. "This reaches into the teaching function for if you can't teach a man you can't place him. There are so many things that you can't do in college if you don't start in high school. Placement people should always be consulted by counselors both at the college and secondary level.

"The high school boys can't see the reason for technical work because they are convinced they can be placed without it. Why study all that math if you can get a job anyhow? In this sense the admissions offices are also involved for they should be giving them the answers to these questions in the freshman and sophomore years of high school — not the junior and senior."

Recognizing that he has been caught up by his old affection for placement, Gordon Hardwick grins at his own enthusiasm and then pardons himself. It is almost dinner time and a reception and two evening meetings are on the schedule.

It is obvious that the man who can give you a splendid definition for "placement" wouldn't recognize the word "retirement" if he were to fall over it.

YOU DON'T HAVE TO BE A SPECIALIST

WHATEVER YOUR talent or skill, there's a place for you with Mutual of Omaha, world's largest exclusive health and accident company, and United of Omaha, one of America's few billion-dollar life insurance companies. Our diversified operations call for people with widely varying interests and educational backgrounds to serve either in our Home Office or in our sales and service offices throughout the country.

Mutual and United offer planned programs for advancement. The rapid growth of these companies has meant quick advancement for our young people. Our department heads and executives are "home grown" which means almost limitless opportunities for conscientious young men and women.

Almost every college degree or area of experience is adaptable and readily usable in Mutual's and United's widespread operations. And just as it says above, "you don't have to be a specialist." Through a well-developed educational system, you have many opportunities to prepare yourself for advancement and the other rewards in a career with these companies.

For information on Home Office careers, or work in your own community, write: Mutual of Omaha and United of Omaha, 33rd and Farnam Streets, in Omaha, Nebraska.



Mutual of Omaha *United of Omaha*
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Esso Research and Engineering Company, Esso Research Center, P.O. Box 51, Linden, New Jersey

REGIONAL ASSOCIATIONS

Continued from page 48

observation was this: "During the campus interview, the applicant sees in us (the recruiter) the embodiment of the company we represent. To him, we are today what he could expect to be in the future if he joined our company. We must therefore typify the kind of person our company would like to have in their employ."

The need for effective company literature was also brought out as an aid to good campus recruitment. Effective literature, it was agreed, can save much valuable time during the campus interview for personal exploration and possible counseling activity. It was suggested by the group as a whole that recommendations be made to the MCRA for continuing research and study in the field of effective company recruiting literature. This should take the form of a survey on exactly what most students want company literature to tell them, with ultimate specific recommendations to the associate membership of MCRA on this subject.

Assess Women's Gains

Some of the conclusions arrived at indicated that the hiring of technically trained women is on the upgrade; companies, however, are not yet exposing women to formal training programs. They object to placing women in major supervisory jobs because of the high incidence of turnover and the unwillingness of men to work for women. Another factor limiting women for executive work stems from their "geographical inflexibility." This may result either because of marriage or because women have a tendency to root themselves in a community.

There was a reluctance to admit that women are moving slowly ahead because of the shortage of manpower, but all evidence submitted by one table group would strongly indicate that this is the case. While the future looks bright for women in industry in professional jobs, the top management spots are not likely to open for them in the foreseeable future. Technical sales jobs are likewise generally closed to them as are jobs involving travel.

In contrast with the freedom of choice of type of work men enjoy, women must perform limit themselves to those jobs in which industry needs them. They do not have the opportunity of participating in rotational programs to explore where their interests and training may best be put to work.

Job opportunities for women are best in retailing, insurance, social group work, and in technical and creative areas of industry, such as advertising, design, public relations, and personnel. There seems to be a trend toward equal pay.

Maynard Boring joined the group in its post-luncheon session. He demonstrated his strong support for recognition of women's capabilities and training through effective job placement.

Liberal Arts was reported to be good background for such non-technical areas as production, sales, public relations, industrial relations, industrial engineering, and personnel.

A leading steel manufacturer reported that for two consecutive years its best trainee was a former psychology major. An automobile manufacturer mentioned that its quota for liberal arts students increased ten times in

the past decade and that its purchasing trainees are all selected from liberal arts graduates. One company reported that accounting was becoming less and less an occupation for men who spend all their time poring over figures and wearing green eye shades and more and more a field for people who have the basic skills and work well with others.

Terminology Found Important

Companies reported that liberal arts graduates require about the same amount of training as other graduates. The chief disadvantage was their lack of basic terminology. One company reported that even its engineers go through a two-year training period. The liberal arts graduates were reported to be more open-minded and therefore more flexible. At the same time, technical graduates were reported less apt to sense their need for part-time study and other advanced training.

The employers recommended that liberal arts seniors work immediately after graduation rather than take advanced work to further qualify themselves for employment. Employers reported that liberal arts students were not as sure as to what they wanted to do as other graduates, which made them less employable. One of the industrial employers spoke up in favor of more career days.

There was considerable discussion concerning the possible demand for liberal arts graduates in time of depression. Some of the speakers thought that liberal arts students might be marginal in terms of their demand. There was some feeling, however, that the current manpower shortage has hastened industries' appreciation of liberal arts. This group felt that the demand for liberal arts graduates would remain relative to that of technical graduates.

Three problems were raised:

Why Not Set Your Sights High?

We Have

This ad is directed to the graduate who *doesn't* want to be just another engineer.

It is pointed toward the man who thinks as we do . . . that our field of electronic research is virtually unlimited, and that we accept the challenge to lead the way in exploring its many unknown facets.

Our idealism has served us well. It has been the driving force behind our spectacular growth in such diversified fields as: automation . . . airborne fire control systems . . . missile systems analog computers . . . radar beacons . . . magnetic amplifiers . . . electronics . . . servo-mechanisms.

We are now seeking like-minded engineers who will join us in continuing our policy of dynamic leadership.

To arrange an interview appointment with an AVION representative . . . or for full details about AVION's career opportunities, write Technical Employment Department.



AVION
DIVISION
ACF Industries, Inc.

Route 17, Paramus, New Jersey Colfax 1-4100

Our Virginia Plant: North Pitt Street, Alexandria, Va.

1. In large universities with special business and liberal arts placement offices employers often avoided the liberal arts office for fear of annoying the faculty members in the business school. Several placement officers reported success in sharing companies between the two schools.

2. There is still a time lag between higher management requesting liberal arts students and intermediate management listing job specifications to permit the hiring of liberal arts graduates.

3. Several placement officers reported that small concerns are not making use of liberal arts graduates as rapidly as are large industries.

One study reported by David Robinson mentioned that during their career liberal arts graduates changed employment fewer times than did other graduates.

This session was singularly fruitful in raising questions. Industry is very much interested in an evaluation of recruiting methods and of recruiters. For meaningful interviews the students should be urged to study company literature prior to the interview. A reasonable time should be set for acceptance or rejection of job offers and some control of plant visits and of expense accounts is in order. Recruiters would like to meet professors wherever possible. Calendars for recruiting, it was agreed, could be made a year in advance. And finally, industry should notify the placement officers of hirings.

On the other side of the coin, placement officers are urged to make plant visits. It is their responsibility to help their own campus administration understand the value of placement. They should get to know their students better and work toward a better and closer relationship with professors and instructors. As a prestige factor it is recommended that placement officers should have academic rank.

ECPO Holds Annual Fall Conference

With a theme of "Focus on the Future," the annual conference of the Eastern College Personnel Officers was held at Lake Placid September 30 to October 3, 1956.

A series of workshop sessions set in motion discussions which continued throughout the meetings. Topics ranged from the place of psychological testing in the recruiting program to try-out summer jobs in business and industry. Highlights of the workshop sessions were:

. . . Non-technical graduates in technical industries are used effectively in production departments, as engineering aides, as salesmen in industrial or employee relations, in control areas. In many instances, however, it is felt that the non-technical man should take some specific technical training courses. It was agreed that many leaders today are liberal arts graduates, that there is breadth to their training which may allow them to climb higher than the technically trained person.

Should Seek Executive Talent

. . . The function of the college placement bureau is to render a service to the student, to the employer, and to the college faculty. The placement officer must try to fit his candidates to the company and to the opportunity. He should seek out executive talent which, in coming years, must be broad-minded, capable beyond present requirements, and mentally and physically strong enough to bear increasing responsibilities.

. . . The gap between technical and non-technical starting salaries is being narrowed, but there are very real problems present in the disparity between business and professional rates. It was felt that companies have the problem of adjusting the salaries of their older employees

to keep pace with increased starting salary rates.

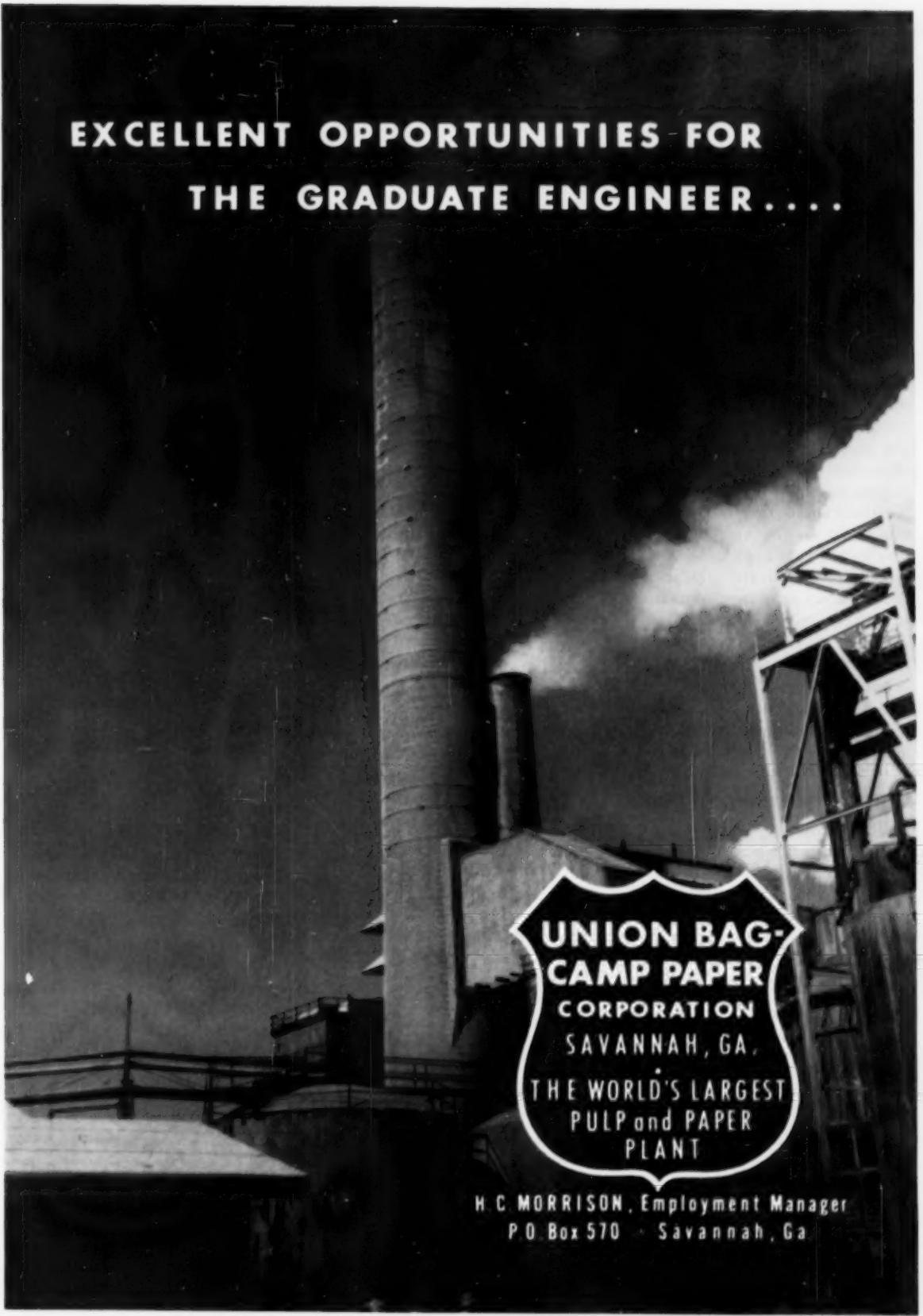
. . . Small business has not been active enough in letting colleges know what they represent. Certain types of students are geared for small business and should be steered there. College placement people, however, are generally unaware of the number of persons needed in small business and of the job requirements. The suggestion was made that the small business man should send in a good job description stating what he has to offer. Another suggestion was that a combination of small businesses get together and put out a combined brochure regarding opportunities for distribution to all New England colleges.

. . . Industry does not agree as to the value of psychological testing in its selection of employees. Some companies reject the idea, but the majority gave tests which have indicated help in selecting men for their particular industry. One business executive pointed out that the tests show "can he do it?" but not "will he do it?". It was agreed that it did not seem practical at the present time for placement offices to adopt testing programs. Individual companies should use the process of getting to know applicants which has proved most successful.

. . . Successful college career conferences should include student participation in planning, student committee activities, and student post-conference evaluation. Conferences might invite speakers from town groups, professional societies, parents, or graduate students, as well as the usual groups contacted.

. . . Teaching faculty in the colleges should share in the placement process, because the successful occupational adjustment of the student is a continuous process beginning with the choice of a department of study. Faculty knowledge of job opportunities and duties may be in-

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creased by distribution to them of company publications, or visits to plants and possibly summer employment. Consideration should also be given to meetings with recruiters on campus, and generally close liaison between faculty and placement officers.

. . . The woman college graduate who expects to work only a short time can make a useful contribution to an organization if employers concentrate training and take every step to utilize her fully.

. . . Employers do not want college placement officers to comment on physical, mental, or temperamental shortcomings of the alumnus unless they can be thoroughly documented. It was suggested that it would be best for the candidate himself to tell his story to the employer. It was agreed that both the employing officers and the placement officers were primarily concerned with helping the individual candidate. The establishment of understanding, especially through general contacts between college and business offices, is the best means of dealing with the problem.

Urge More Information

. . . Programs adopted by industry for maintaining relations between college placement officers and company recruiters should directly assist the placement officer in his counseling. Specific and usable information about company needs, opportunities and special services, and reports on where graduates are in the company should be provided by the placement officer.

. . . The possibility of academic programs which would include courses in occupations, taught for academic credit, was discussed. It was concluded that such programs were best suited to juniors and seniors and would depend upon the individual college and its facilities for administration.

. . . Today's counseling is modern in that it is adaptable to contemporary civilization. It incorporates individual, career, and group counseling.

. . . Campus recruiting is not a static process and new aids are constantly being developed. Some of these are educational television stations, the purchasing of advertising space in college newspapers, use of campus radio stations, visual aids for use in the personal interviews, and speakers and programs provided for student organizations.

. . . Placement officers and industry must work closely and efficiently together. This is especially true in the face of current pressures to handle the expanding activity and confusion of college recruiting, the problems of ethics and increasing recruiting costs, and the problem of starting each young graduate toward his career with adequate training and proper perspective.

. . . Counseling of students early in their college career through both group and individual meetings was felt essential. Industry stressed the great need for students to relate their course of study to the needs of business.

. . . Industry and colleges should work together in overcoming the unpopularity of certain jobs. Industry can do this through invitations for plant visits to faculty, students, and placement officers, better informed recruiters, and well planned junior summer training programs. Colleges can conduct career conferences, meetings between faculty and industry, and full use of college communications.

. . . There is a growing trend toward making summer work more meaningful. For the student, such employment contributes significantly to his development and increases his market value. At the same time industry gains not only in terms of permanent employees but also in good will for the company.

. . . One of the most significant trends in teacher placement is the important role industry can play in helping to aid the current teacher shortage. The Lexington Plan, a pilot program initiated by Arthur D. Little Company, is an effort to increase the number of science teachers.

Student Service Paramount

At separate discussions, the men's colleges and the employers agreed that the common objective of both placement officer and recruiter is and must continue to be of service for the benefit of the student. In the face of the tremendous expansion of business and industry and the tremendously short supply of competent and trained personnel, it was felt advisable to consider the establishment of a set of rules and attitudes for both industry and colleges aimed toward better recruiting.

In another meeting, the women's colleges and employers discussed the important aspects involved in senior recruitment both for the company and the placement officer. Emphasis was placed on the importance of full exchange of information among placement officer, employer, and candidate, and the various methods by which this could be achieved. A second part of the women's session covered summer job opportunities for undergraduates.

A section of the afternoon session on October 1st was devoted to two major addresses on vocational rehabilitation and placement of the handicapped. Donald H. Dabelstein, Assistant Director of Vocational Rehabilitation, U. S. Department of Health, Education and Welfare, described his agency's program. Fred C. Board, Executive Director of Just One Break, Inc., Bellevue Hospital, New York City, stated that "the job requirement, the vocational requirement, must be evaluated in view of the result expected for

INVALUABLE

is the only word RCA knows how to use in describing
the services of

PLACEMENT OFFICERS

of colleges and universities across the country.

RCA will continue to cooperate in every aspect of its highly productive relationship with placement officers. RCA further pledges to utilize to the utmost the skills and talents of graduates with bachelor or advanced degrees in EE, ME or physics, whether these men enter fundamental research, applied research or design and development.



RADIO CORPORATION of AMERICA

College Relations, Dept. CR-1M
Camden 2, N.J.

the given vocation. It must be evaluated in view of the individual's capacity and occupational ability to do the job. If this is done, the individual can compete for a specific occupation in the open market. He is no longer dependent upon institutional life or parental shelter to find his way into productive life."

Samuel D. Lunt, a member of the firm of Hamlin and Lunt, Buffalo, and Industrial Chairman of the Empire State Foundation, was the principal speaker at the evening session on October 1st. Mr. Lunt reviewed the program of the Empire State Foundation, an organization established to raise money for the liberal arts

colleges in New York State. He stated that "because of the complexity of industry today, industry must have a more rounded employee. Since industry is beginning to realize its need for the better educated man and woman, they (industries) have to assume some of the financial responsibility." He quoted the Wall Street Journal as reporting that in the 3-year period 1952-55, industry's gifts to higher education had more than doubled.

President Millicent C. Mc Intosh of Barnard College addressed the final session of the conference on "What's Ahead in Education."

The following officers were elected for 1956-57: President, Philip J. Brockway, University of Maine; 1st Vice President, Alice Norma Davis, Smith College; 2nd Vice President, John F. Butler, Trinity College; Secretary, Betsy James, Skidmore College; and Treasurer, Pennell N. Aborn, Virginia Drew Guidance Center.

Members at Large are: College - Samuel H. Beach, Columbia University and Raymond Stockard, University of Rhode Island; Industry - J. Edward Smith, Armstrong Cork Company and Philip H. Yost, Connecticut General Life Insurance Company. The ex-officio member is Ruth Houghton, Barnard College.

**ROCKY MOUNTAIN ASSOCIATION SURVEY OF AREA SCHOOLS
JOB LOCATION, NUMBER, AND PER CENT, AVERAGE SALARY OF PERSONS PLACED THIS
YEAR AS REPORTED TO PLACEMENT OFFICE — SEPTEMBER 1, 1956**

Number and Kind	Home State	Other Mtn. States	Southwest	West Coast	Midwest	East	Other	Av. Salary by Schools
ENGINEERS								
MECHANICAL 145	29 22%	15 8%	18 13%	44 30%	24 17%	15 10%		\$430.00
ELECTRICAL 145	29 22%	11 7%	13 6%	51 33%	17 13%	23 17%	1	\$435.00
CIVIL 118	40 34%	23 19%	8 7%	34 28%	8 7%	2 2%	3 3%	\$415.00
CHEMICAL 40	4 10%	5 12.5%	6 15%	12 30%	7 17.5%	6 15%		\$437.00
AERONAUTICAL 20	3 15%	1 5%	2 10%	8 40%	4 20%	2 10%		\$450.00
OTHER 143	23 17.7%	28 15.4%	10 6.1%	16 12.3%	36 27%	26 20%	4 1.5%	\$409.00
PHYSICISTS 40	11 27.5%	4 10%	2 5%	14 35%	3 7.5%	6 15%		\$450.00
CHEMISTS 60	5 8.3%	12 20%	8 13.3%	10 16.7%	18 30%	6 10%	1 1.7%	\$429.00
MATHEMATICIANS 20	3 15%	12 60%	3 15%	2 10%				\$400.00
ACCOUNTANTS 115	52 42%	9 8.4%	5 4.7%	25 23.3%	18 16%	5 4.7%	1 .9%	\$380.00
BUSINESS ADMIN. 150	41 29%	36 14%	13 10%	18 14%	35 27%	7 6%		\$361.00
OTHER BUSINESS 91	37 42%	20 16%	6 7%	15 18%	10 11%	5 6%		\$350.00
TEACHERS 1230	712 58%	90 7.3%	59 4.8%	230 18.7%	108 8.7%	21 1.7%	10 .8%	\$3600. per yr.
OTHER FIELDS 95	49 52%	5 5%		30 32%	8 8%	2 2%	1 1%	\$340.00
OTHER LIBERAL ARTS 48	22 46%	9 19%	2 4%	10 21%	2 4%	3 6%		\$335.00
GEOLOGY 34	7 21%	17 50%	5 15%		4 11%		1 3%	\$412.00

AIR CONDITIONING:

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- THE FIELD IS ALREADY BIG, GROWING FAST . . .
- YORK IS A LEADER IN THE FIELDS OF AIR CONDITIONING AND REFRIGERATION . . .
- EVERY YORK INSTALLATION IS ENGINEERED . . .
- THAT'S WHY YORK LOOKS FOR ENGINEERS WITH MANAGEMENT POTENTIAL,
TRAIN THEM WELL FOR RESPONSIBLE POSITIONS.

Air Conditioning today is more than accepted: it's expected and such burgeoning industries as frozen foods are making heavy demands for refrigeration. York clients include banks, hotels, huge office buildings, industrial plants, food processors, and government installations.

York systems are engineered to fit the particular requirements of each customer. This is important to York, because it is one of the factors contributing to York's reputation as a producer of quality air conditioning and refrigeration. It is important to the graduate engineer, because it indicates York's dependence upon the **engineer**. York's industrial systems are sold by engineers who contribute their skills to the specification and installation of the system, each step of the way.

York's smaller packaged systems

for stores, residences and individual rooms are factory engineered to fit the ever increasing variety of commercial applications. And York offers its engineer greater flexibility in his system designs through more types of air conditioning or refrigeration equipment than any other manufacturer.

For the York engineer, the jobs vary: today's might be a large office building; tomorrow's a bank, a store, a huge factory, or even an environmental test hangar for the Air Force.

York management is largely drawn from its engineering staff. Today, of the 25 top engineering executives at York, 19 came up through the YORK College Graduate Training Program. Being engineers, they know the problems and aspirations of young engineers . . . and they

know how to help them get ahead.

The **YORK College Graduate Training Program, alone in the industry** provides a personalized and tailored training content beamed to the specific placement chosen by the Engineering graduate. It is comprised of integrated classroom and on-the-job training assignments under both the Graduate Engineering Training Program and the Graduate Business Training Program to assure fullest personal development.

To learn more about the Air Conditioning and Refrigeration industry, York Corporation, and its highly effective College Graduate Training Program for your graduating engineers, write: Training and Education Department, York Corporation, a Subsidiary of Borg-Warner Corporation, York, Pennsylvania.



the quality name in air conditioning

HEADQUARTERS FOR
MECHANICAL COOLING SINCE 1885

YORK
CORPORATION

PROMOTION FROM WITHIN

Continued from page 16

over-all manpower survey of what our requirements will be for the next one to two-year period, just as we budget for other things. Our company, from our organizational standpoint, is broken down into seven basic divisions, namely, Manufacturing, Marketing, Industrial Relations, Controller's, Treasurer's, Secretary's, and Northern Sales. Each division has a director reporting to the President.

Directors Know Jobs Best

Each division director determines his division's requirements after discussion with his department managers. Requirements naturally are such that not all the anticipated openings will be filled by trainees, but in determining total requirements directors are in a better position to determine just what jobs could best be filled a year or two hence with the "trainee-type" of man.

Because we definitely practice the policy of promoting from

within at every logical opportunity, only a very small percentage of higher level jobs are filled by direct hire. That means we are not one of the companies which can induce a highly-sought-after inexperienced college graduate to join us with promise of a fantastic job as V. P. in the next couple of months. We can pretty well assume that if a position of that type were to open up suddenly, it would have no direct bearing on our college recruitment. Instead, a series of promotions would most likely occur, with the ultimate hiring being done for beginning-level job.

Our General Training Program is a continuing program. It is an individualized one also — two conceptions that are rather difficult to cope with simultaneously. By the former, we mean that there is no specific starting date; no predetermined stopping date; no formalized timetable that all trainees carry out.

By an individualized program,

we mean that each trainee is treated as a specific individual, answering a definite personnel need. His training program is then geared as closely as possible to provide him with the orientation that both his future supervision and he feel is most desirable. It is an "on-the-job" type of training program. He "graduates" when he becomes the best qualified candidate to fill a specific planned vacancy when it occurs.

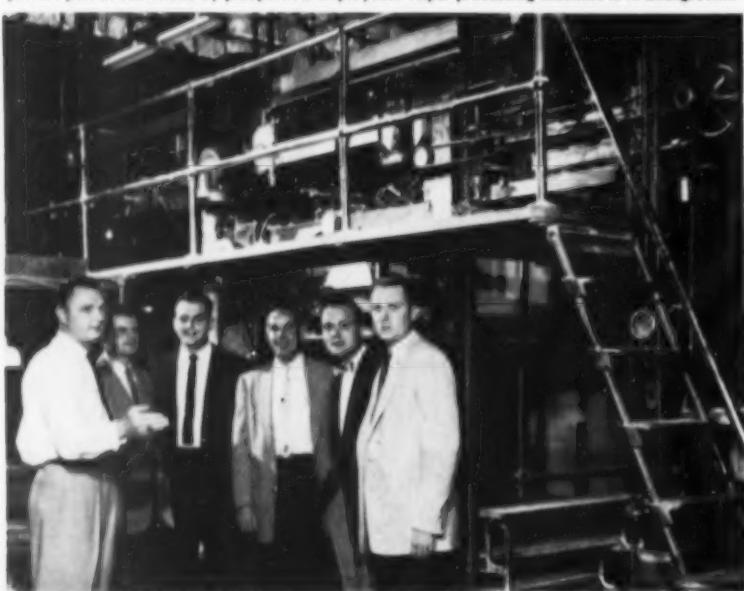
Firm Practices Vary

The manpower requirements, the objectives, the principles for recruiting should be established by each company to suit its particular needs. Our manpower requirements are quite conservative when compared with other companies. Experience of some companies leads them to employ 100 trainees in order to have 50 remaining in their employ 12 months later. Others believe it is good policy to have two men fighting for one job, with the contest to run a year during a training period and the job going to the one who "survives" — sort of a survival of the fittest routine. Our approach, however, can be likened somewhat to the relationship between a mother bear and her cubs. Walt Disney's picture *Bear Country* points out that the cub is nurtured, taught, protected for two years before being shoved out on his own. After that, the bear does pretty well for himself. In discussing our selection procedure, you will see why we take more of a "nurturing" attitude than a "survival of the fittest" attitude during a man's first year or two of employment. The course your company takes regarding its objectives and principles in recruiting will have a bearing on your manpower needs.

The recruiter in all respects represents the company. As such, he plays a very important part in recruitment and selection.

He is all, and he represents all, that you have previously

Marathon chooses ex-trainees to take responsibility for the guided plant tours which play an important part in visitations by prospective employees. Paper processing machine is in background.





LET'S LOOK AT WHAT BUDD IS DOING!

With Continual Expansion We Welcome Engineering and Science Graduates

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STRESS ANALYSIS AND THERMODYNAMICS ENGINEERING in problems using high temperature resistant alloys that resist radiation damage and have high tensile strength for the nuclear propulsion, airframe structures and missile fields.

PRODUCT DESIGN on automotive, railway passenger equipment, highway trailers, dies and jet engine components.

LABORATORY AND TEST ENGINEERING in metallurgical, static, fatigue, tensile, climate, heat treating, spectrographic and chemical analysis, welding and x-ray testing of products and processes.

METHODS AND EQUIPMENT ENGINEERING on plant layout, machine design and automation, electrical and welding equipment design.

PRODUCTION MANAGEMENT in automotive, railway car, trailer, foundry, machine shops, plastics and other production divisions as well as the manufacturing service departments such as maintenance, planning, safety, trucking, standards, inspection, and stores.

RESEARCH AND DEVELOPMENT in new products and processes, airframes, missiles, nuclear propulsion, radioactive instrumentation, railway cars, trailers and plastics.

Liberal Arts and Business Administration Graduates

for:

ACCOUNTING in industrial cost accounting, systems and procedures, payroll and tabulating, tax, auditing and other general accounting functions.

PRODUCTION MANAGEMENT in automotive, railway car, trailer, foundry, machine shops, plastics and other production divisions as well as manufacturing service departments such as planning, inspection and standards.

SALES ADMINISTRATION in various divisions of the company where technical background not required.

PURCHASING of steel production materials, capital equipment, maintenance and repair materials and other purchasing items.

GENERAL ADMINISTRATIVE in marketing, public relations and advertising, treasury, planning, estimating, and the international division.

Contact your Placement Officer for further information about a campus or plant interview or write for our booklets: "Your Engineering Opportunity at Budd" or "Your Management Opportunity at Budd."

Write: Personnel Manager
The Budd Company
Philadelphia 32, Pa.
or
Detroit 15, Michigan

Budd



Bodies and Wheels for Automobiles, Trucks, Highway Trailers • Railway Passenger Cars and Disc Brakes • Jet Engine Components • Agricultural Implements • Nuclear Energy Radiography Units

decided. He knows his company — its principles, its objectives, its policies, structure, future. He understands the industry and the part played by his company in that industry. He is all that you have read about many times before — he is a "good listener"; he is understanding, candid, is able to communicate; he plans, carries through his plans, and follows up. He is thorough, believes in seeing to it that the "Little things get done" so that the big things sort of fall into place.

The recruiter must be capable of doing the "nigh unto impossible." In a 20-minute interview, he must sell the industry to the applicant, identify and sell his company, explain the training program, tell of the immediate job, describe future opportunities, touch on fringe benefits, highlight company policies, answer a number of questions, and still provide time for the applicant to tell his story and sell himself. To top it off, the recruiter must make a sound decision. All of this in a few minutes. This was well pointed out in a recent article by Harrymon Maurer entitled "Twenty Minutes to a Career."

Best Sources Are Determined

Let us assume that we now know (1) why we are recruiting and (2) what we are recruiting, in terms of both number and qualifications. Then, after we have selected an appropriate recruiter or recruiters, our next step is to determine the colleges and universities which we feel are the best sources for the men we require. Factors such as the relatively short recruiting "season," availability of interview dates, budget, number of recruiters — all have a bearing on how many and what type of schools we contact.

Interview dates are established; itineraries are worked out; recruiting material is distributed; placement officers are advised of

our specific needs; a program of "light-weight" propaganda is set in motion. The result, we hope, is a full schedule of interviews at each stop with men of high potential.

The initial interview is quite an important phase of our recruitment. To make it mutually beneficial, our recruiter has to come prepared to answer certain specific questions and to make certain specific decisions.

No offers of employment are made on the campus as the result of an initial interview. Our policy: Offers will be made by, and on decision of, "line" supervision for whom the prospective employee will be working. In most cases, this means the candidate must come to our headquarters office in order that "line" supervision and candidate can get a good look at one another. We want him to appraise us in our own surroundings.

The recruiter, usually a member of our Industrial Relations Division, therefore must have knowledge ahead of time of when final selection will take place and pass that information to the candidates he feels should be invited to our office for final selection. In the case of men being considered for our Marketing Division, for example, we have over half a dozen sales managers and at least an equal number of other marketing managers who would be potential "employers." To get a majority of these busy executives to find a day or so when they will all be in town and available is a problem in itself.

This problem is minimized for us because our management recognizes selection as an important responsibility that can't very well be delegated. The recruiter, during the campus interview, is in the position where he can recommend one of three things: (1) that the candidate come in for final selection, (2) that the candidate should be turned down as far as further consideration

is concerned, or (3) that the candidate falls into the somewhat nebulous category of postponing action temporarily until we have an opportunity to evaluate other candidates and he evaluates other companies.

Whatever the decision, we try to make it known to each applicant and to the college placement office at the time of the initial interview. If, for some reason, it is not possible to reach that decision immediately — the recruiter may need more time to investigate a particular point than the 20-minute interview permits, for example — we make sure that the matter is followed up and that the candidate is informed of our decision just as soon as possible.

Placement Directors Advised

In this connection, we believe the college placement people are desirous of doing the best job they can, and in order for them to do so, we feel we should keep them informed of the status of each applicant being considered. We see to it that the college placement office receives copies of all our correspondence inviting their men to our main office, of our offers made, of the turn downs. We make sure the copies of our correspondence include the name of our company, a matter which is often overlooked according to some placement directors.

Although our recruiter is on the move all during the recruiting season, he is still considered by us as the "contact" man as far as the candidates are concerned. He makes the arrangements for each man visiting us, follows up on each, and sees to it that each is closed out satisfactorily. We are not such a large company that we would require a "specialist" recruiting for engineers, another "specialist" for sales, etc. It is our desire that our recruiter be capable of covering all the manpower



SLIDING DOWN THE WAYS at Groton, Conn., goes the USS Nautilus, newest and fastest member of our undersea fleet. During welding, Worthington heavy-duty turning rolls rotated the hull sections.

How the world's first atomic sub was welded

Welding the hull of the USS Nautilus, world's first atomic submarine, presented a tough problem.

Submerged-arc automatic welding seemed to be ideal for the job. Question was—could you rotate the hull sections of the Nautilus to take advantage of this fast, high-quality welding method?

Worthington's answer to General Dynamics Corporation's Electric Boat Division, builder of the Nautilus, was the largest turning roll ever built.

The result? Welding of the Nautilus hull was accomplished in record-breaking time—and cost less than originally estimated. Unchanged, the Worthington roll

set-up is also being used in the construction of the nation's second atomic sub, the USS Sea Wolf.

Turning rolls for submarines aren't all that Worthington makes. The long list of Worthington-designed, Worthington-built equipment includes air conditioning units, construction machinery, compressors, Diesel engines, steam power equipment and, of course, pumps of all kinds. For the complete story of how you can fit into the Worthington picture, write F. F. Thompson, Manager, Personnel and Training, Worthington Corporation, Harrison, New Jersey. You may be glad you did.

4.28 B

See the Worthington representative when he visits your campus

WORTHINGTON



When you're thinking of a good job—think high—think Worthington

AIR CONDITIONING AND REFRIGERATION • COMPRESSORS • CONSTRUCTION EQUIPMENT • ENGINES • DEAERATORS • INDUSTRIAL MIXERS
LIQUID METERS • MECHANICAL POWER TRANSMISSION • PUMPS • STEAM CONDENSERS • STEAM-JET EJECTORS • STEAM TURBINES • WELDING POSITIONERS

requirements for all divisions of the company.

After arrangements have been completed for the candidate to visit our main office, the "specialized" or "individualized" selection procedure goes into effect. The sales aspirant is referred to the Marketing Division Personnel Representative, the accounting aspirant to the Personnel Representative for accounting, the engineering candidate to our Manufacturing Division Person-

COMING MEETINGS

Western College Placement Association will hold its annual meeting at the St. Francis Hotel in San Francisco on January 17-18.

The University Counseling and Placement Association (Canada) has scheduled its next conference on June 10, 11, and 12, at the University of Ottawa.

Eastern College Personnel Officers will hold their next conference at Poland Spring, Me., instead of Mt. Washington.

The Southwest Placement Association will meet in Albuquerque, N.M. in 1957.

nel Representative. They guide the selection program to its conclusion.

Candidates for marketing, which includes our various sales departments, are brought in at one time, accounting at another, personnel at another. Groups are held to 12 or less. Top management men in these areas have been alerted so that they are free on the day or days involved to devote their time to interviewing the visiting candidates.

Besides telling candidates on the campus when we would like them to come, we wire them (with copies to their respective college placement offices) to appear at our central office at 2

p.m. on a given day — usually Sunday. At that time, a group picture is snapped — the use of which I will explain later. Applicants are given a five-minute briefing of what is in store for them for the next day and a half and then a battery of tests is administered lasting about 80 minutes and consisting of intelligence, personality, clerical proficiency, and mechanical adaptability or sales aptitude.

After tests, there is a good old-fashioned bull session for about an hour and a half during which time a few of the basic facts about our company and the industry are outlined to them in conjunction with a 12-minute audio-visual presentation. But the greatest portion of time is given to answering questions which the individual applicants might have about anything. We make a point to give candidates the names of all their former classmates from their respective schools who have been hired by the organization, what their progress has been with the company, and where they can be located if they should care to talk with them.

Then, candidates are taken on an hour and 15-minute tour of Neenah-Menasha, so they can get a complete picture of shopping and recreational facilities, residential areas, and general appearance of the communities.

We then have dinner as a group and as many of the next day's interviewers as possible attend. Candidates are taken back to our Marathon Guest House by about 8:30 or 9 p.m.

Next day: Interviews start at 8 a.m. and each of the sales candidates is interviewed by seven or eight interviewers who consist of six members of top sales management, the Marketing Division Personnel Representative, and frequently our Personnel Manager or myself. As there are more candidates than interviewers, there is some free time and it is during these free periods that candidates are

encouraged to talk with various people in our organization, especially old classmates, so they may get additional first-hand information about anything they desire. There is absolutely no priming by us of any of the people that they may contact. By properly scheduling the interviews, we find there is also time to provide small group guided tours through our Menasha plants throughout the day. An informal noon luncheon for all candidates and interviewers is held at our Marathon Guest House from noon to 1:30 p.m.

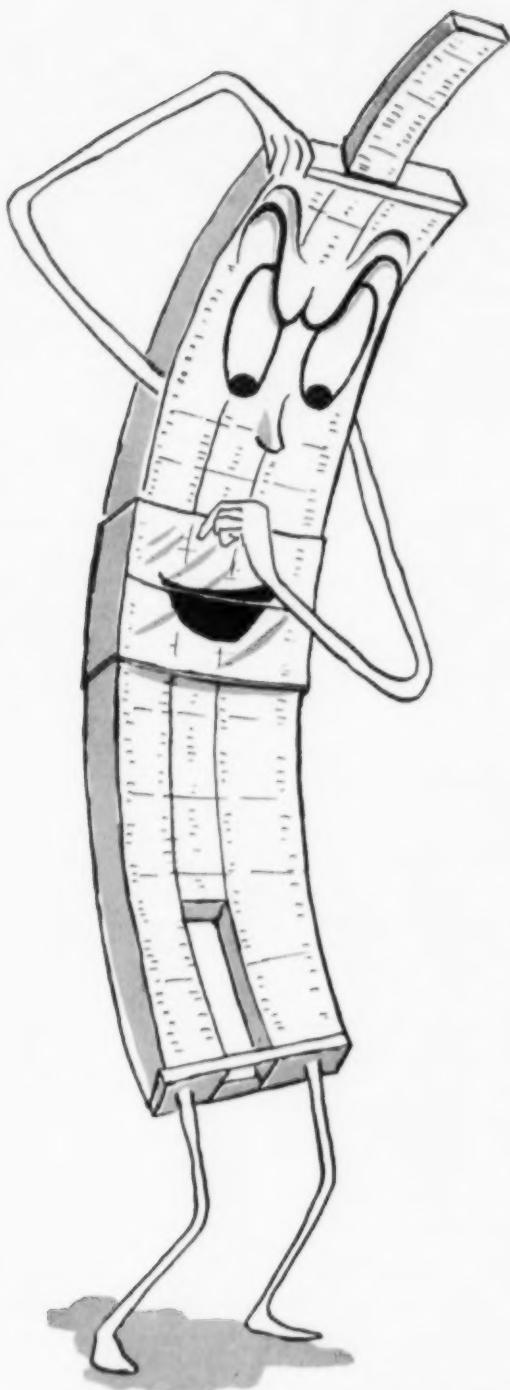
Complete Schedules Provided

Each candidate is given a complete schedule, listing all activities including exact time of each interview, name, job title, and department of interviewer, etc. In addition, each Marathon interviewer is provided with an interview schedule sheet listing candidates that he will see at each half-hour interval and brief basic information about each.

On this interview sheet, a space is provided for notation of comments and, upon completion of the interviews at 4 p.m., each interviewer must immediately, on his own, rank all candidates from 1 to 12. To aid him in doing so, a print of the picture which was snapped the previous afternoon is provided, so he has the photo as well as his interview sheet, to aid in distinguishing and recollecting relative merits of different candidates.

These interview sheets are then collected immediately from all interviewers by the Personnel Representative and rankings put on a large prepared blackboard in our conference room which lists names of interviewers, candidates, individual rank, and over-all results.

A selection conference by all interviewers is then held starting as soon after 4 p.m. as possible. At the completion of interviews



What a slide rule *can't* calculate!

As a placement officer, no doubt you've done it often, but . . . *put yourself in the place of a senior engineering student today.*

You feel you're on the threshold of a promising career. Your college work has been above average; word is going around that again this year there are more good jobs than there are engineers to fill them.

OK, now what?

The promises and offers begin. The better you are, the more choice you'll have. But how do you *measure* offers? How do you scale promises? On what do you base your calculations? Suddenly that slide rule you've learned to rely on becomes about as helpful as a divining rod or a discerning ouija board!

Analytical thinking at this point will help. Reducing the problem to its simplest terms: your main objective is to locate in a company whose record of engineering achievement marks it as one in which your talents will be recognized, prized and fully utilized.

Such an analysis may not be easy for a senior engineering student today. However, as a placement officer, no doubt you've done it often.

*World's foremost
designer and builder
of aircraft engines*

PRATT & WHITNEY AIRCRAFT

DIVISION OF UNITED AIRCRAFT CORPORATION
EAST HARTFORD 8, CONNECTICUT

at four o'clock, sales applicants are taken to the office of our Executive Vice-President in charge of Marketing for about an hour's visit. This enables them to talk with the highest authority in our company for Marketing who can answer the broadest questions concerning our sales policies, future plans, and other aspects of the over-all picture of what employment at Marathon might mean to each of them.

During the time the candidates are in the Executive Vice-President's office, we conduct our selection conference. We start with the candidate who is 12 in over-all rank and each of the interviewers is asked to comment briefly on the candidate. If someone may have ranked him near the top as occasionally happens, that interviewer is asked to explain his interest in the candidate.

Agreements Are Unanimous

Each candidate is thoroughly discussed and we proceed until the candidate being discussed can be unanimously agreed upon by the group as the one whom we should hire.

We thus end with an indication after each candidate as to whether or not the consensus of the group is to hire or pass. At that point, test results are brought into the picture and carefully reviewed for each of the candidates interviewed.

When applicants return at about 5 p.m., they are briefly bid good-bye and told that they will be notified within 24 hours of Marathon's decision.

The next day — normally a work day — telegrams are sent to candidates either specifically offering them a job or turning them down. Again, carbons of these wires are sent to the college placement offices.

Each candidate is told that we would appreciate a decision on his part as quickly as possible

but that we do not want a decision until he is absolutely sure in his own mind as to the correctness of it. In most cases, the response is quite rapid but,

A MATTER OF RECOGNITION

Because of the welter of organizations active in the field of college placement and recruitment, it is becoming increasingly important to recognize the one official, non-profit organization representing college placement officers and the recruiters.

It is the COLLEGE PLACEMENT PUBLICATIONS COUNCIL, INC., known by its seal and the initials CPP which appear on this JOURNAL, the stationery of the Council, and will appear on the new annual job directory to be known as YOUR FUTURE.

As President Teal points out in his editorial this month, the adoption of a common constitution for the Council by the regional associations (ratified by the six which have held their conferences) is the final step in establishing a unity of purpose in support of the objectives of the Council.

To be sure of the endorsement of questionnaires, communications, and new projects in the placement field, look for the CPP seal.

occasionally, a particular candidate may not have had an opportunity to interview a number of the companies that he would like and we may wait 30 days or more for his answer. By the very nature of our training program, it is desirable to not have all of the trainees start on the same date, so we leave it largely to the individual trainee to pick his starting date. We feel that this approach to selection insures that the ones selected

have the backing of all concerned, and tends to eliminate the "fair-haired boy" being "pushed" into the company — a practice unfair to the boy as well as to the company.

We pay complete household moving expenses of the trainee at the time of hire, as well as his own personal transportation expense to the job. We also provide first-week board and lodging for him and his family if they have not found suitable living quarters prior to that time. We make every effort to help them find suitable housing and, in 75% of the cases, are able to give them the lead which helps them in getting located.

Trainees Have Top Potential

As indicated earlier, we attempt to fill only a certain percentage of all of our vacancies through our General Training Program. In the training program, we are interested only in men who possess the earmarks of top potentiality for future positions of a professional, administrative, or executive nature.

In addition to the training program, however, due to our inability to always anticipate future needs, a number of trainee caliber men are hired for immediate specific jobs. Inasmuch as our objective is to secure the type of person just described, our recruiting is geared to accomplish that objective primarily. We are not at all interested in just "good Indians" for this program.

A look at the jobs now being held by ex-trainees who came to Marathon through our college recruitment and selection program, will give all the evidence we need in justifying the time, the money, and the effort involved to conduct such a program annually. It would be difficult to imagine where we would be today, or where we could go tomorrow, if we did not have a program of this nature set up and operating to meet our particular needs.

Students frequently ask us:

Does Du Pont hire men who have definite military commitments?

Yes, indeed! We've employed many college graduates with definite military commitments, even when we knew they could work no more than a few weeks before reporting for duty.

You see, we're primarily interested in men on a long-range basis. The fact that they're temporarily unavailable, for a good reason like military service, isn't any bar to their being considered for employment. After working only one day, an employee is guaranteed full re-employment rights—that's the law, as you well know. And if a man works for Du Pont a full year before entering the

service for two or more years, he receives an extra two months' salary. If he goes into the service for six months, he receives a half month's salary. When he's entitled to a vacation but doesn't have time to take it before leaving, Du Pont gives him equivalent pay instead.

Even if present employment is impossible, we definitely recommend that students talk with our representatives—and those of other companies, too. The very least they'll gain will be valuable background and some contacts of real benefit to them when they leave military service.



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

OUR ETHICS—A JOURNAL FORUM

Continued from page 19

by the early influences to which they are subjected. We may well be setting the standards of integrity for the business of tomorrow by the influences to which we are exposing these young people as students today.

We would remind the recruiter that his policies and actions may well have a direct effect on the hopes and aspirations, the future welfare and happiness of a whole generation of young people, and through them the generation to follow, and that he will not long be permitted to temper lightly with this tremendously important group of people.

We would remind the recruiter that his own long-range welfare requires that his policies and actions be based on common sense, good taste, and high standards of employee and public relations, governed by the principles expressed in the "Golden Rule", rather than on immediacy or pure expediency.

If we can arrive at and gain acceptance of the necessary attitudes, and thus establish the plane on which we believe our activities should be conducted, then we in business and industry, firmly believe that our common objectives can be attained by the following means:

1. The drawing up in clear, concise, and understandable terms of the *basic principles* under which it is considered desirable that campus recruiting activities be conducted—yet in broad enough terms to allow for necessary individual variations.
2. The delineation of the common *practices* and techniques which orderliness in a rapidly mushrooming operation, as well as common

courtesy, dictate as desirable.

3. The definition of terms used, in as clear a fashion as the intricacies of semantics will permit, in order to eliminate at the outset the maximum possible number of areas of misunderstanding.

These three steps we believe should be undertaken, through the already existing machinery of the college placement organizations, by the representatives of business and industry and placement people jointly, so that it will carry the weight with newcomers to recruiting which only a joint effort can produce, and thereby avoid the appearance of any set of rules or regulations being imposed by one upon the other.

4. Acceptance by the college placement office of the responsibility to see that each student registering for placement purposes is given a copy of the rules, particularly those parts of the principles and practices that pertain to him; and that departures from desirable practice are promptly called to his attention, and proper action taken where necessary, within the limits that such action may be taken on individual campuses.

5. Acceptance by the college placement office of the responsibility for seeing that:

- (a) each recruiter is given a copy of the principles and practices arrived at, at the time he makes his date to visit the campus; and that
- (b) departures from desirable practice are promptly brought to the re-

cruiter's attention as soon as reported to the placement director, with appropriate action individually, or in concert with others, where transgressions persist.

6. Acceptance by the recruiter of his responsibility

(a) for abiding by the *spirit as well as the letter* of the principles and practices agreed upon, unless by mutual agreement with the placement office a departure from the standard is desirable or necessary; and

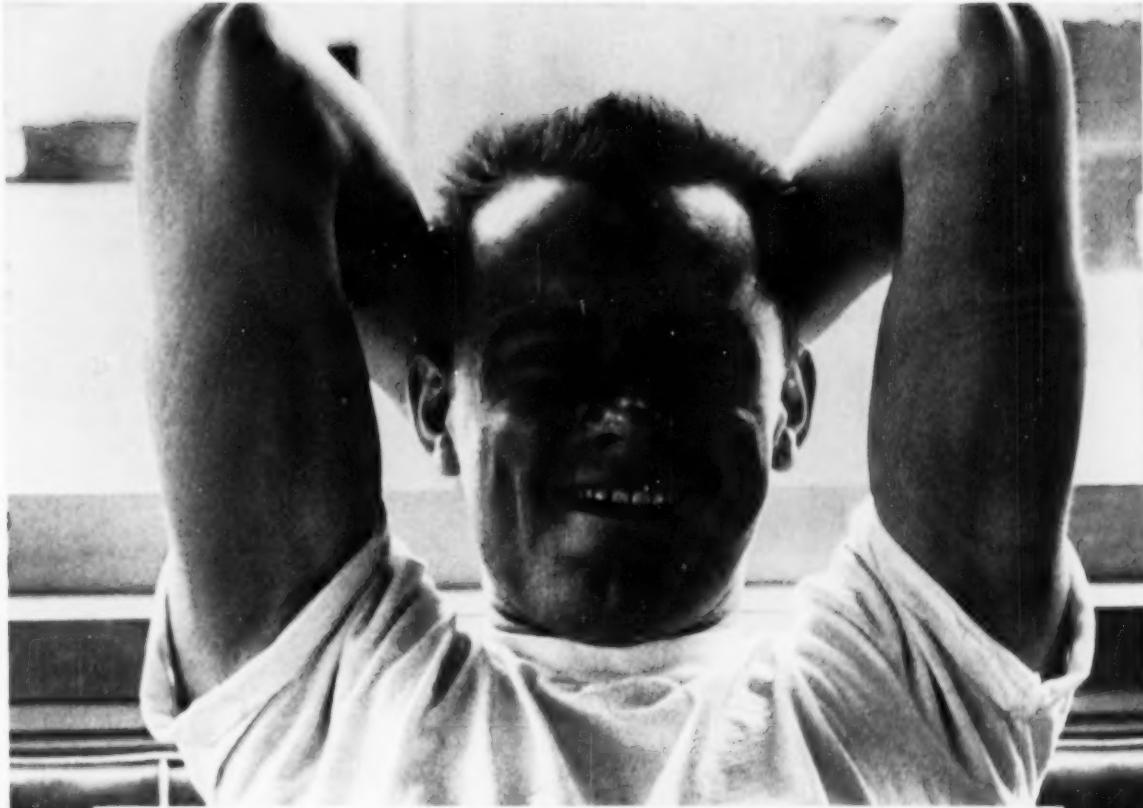
(b) for seeing that his top management and operating personnel concerned with college recruiting activities are thoroughly informed of these principles and practices which recruiters are expected to observe.

Plan Group Action

7. Setting up machinery to provide for necessary review and revision of the principles and the practices agreed upon, to guarantee their timeliness and applicability in a rapidly changing, dynamic environment. We believe this to be important because, just as today practices which in the past have been considered perfectly acceptable and even encouraged may now have become anathema through sheer weight of numbers, so tomorrow situations may well arise requiring prompt group action.

8. Professional and business groups or societies directly or indirectly interested in or affected by the activities in which we are engaged should be actively solicited and encouraged to contribute to and support the ends we seek to achieve.

(Continued on page 100)



Graduates can build their future at Crane Co.

The excellent career opportunities in this growing company are virtually unlimited.

We make more than 50,000 product items . . . serve virtually every industry in the country.

Engineering—Openings for mechanical, metallurgical, ceramic, chemical, sanitary, heating, hydraulic, welding, and mineral engineers.

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Research and Development—These engineers will work toward the development of titanium and atomic energy; also in new ferrous and non-ferrous metals and alloys.

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Because of this widespread diversification, we can satisfy a great variety of interests and many different talents.

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Control—Business graduates qualify for openings in operational costs, general accounting, auditing, leading to supervisory responsibilities.

Finance—Openings in credit and dealer relations for Economics and Business graduates with long-range career plans.

Graduates unable to arrange an interview on campus should write to:

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ECPO Placement Officers' Discussion of Ethics

The foregoing remarks by Mr. Yost were delivered at a forum on recruiting ethics at the Eastern College Personnel Officers' conference. Other participants were George P. Donaldson of Boston University and Donald W. Cameron of Dartmouth College, chairman.

Mr. Donaldson, along with William O. Wyckoff of Williams College, had earlier conducted a discussion of recruiting practices for representatives of men's colleges. Mr. Yost was chairman of a similar meeting attended by employer representatives. Each summarized the opinions of his respective group.

Reporting for a committee of ten, Mr. Cameron recommended the following proposal to the Executive Committee of the Association.

"This committee reaffirms its belief in and support of the Code of Ethics. We subscribe to the broad procedures recommended for industrial recruiting. We recognize that the Code is only a suggestion for acceptable procedure and cannot be enforced save as industry and the colleges together volunteer to comply.

Opportunism Deplored

"Recently, recruiting practices not heretofore considered appropriate or acceptable have been introduced into the recruiting effort by several business organizations. It is obvious that these organizations fail to honor their responsibility to the student and to the faculty members by their application of questionable pressures, and to the placement officers by the disruption of an orderly procedure of recruiting activity. Their opportunism and rationalization of long-range goals for immediate results invite the introduction of more questionable practices.

"We believe the cooperation and services of placement offices,

freely extended to industry and at industry's original request, cannot, in full conscience, be long abused.

"Therefore we recommend that the E.C.P.O. join with other regional placement groups in a re-examination and refinement of the Code of Ethics in order that there shall be outlined more clearly procedures and defined more sharply industry's responsibility to student and college alike."

Commenting on the Committee's report and on further discussions of ethics, Mr. Cameron adds, "Throughout the entire Lake Placid meetings, there appeared to be considerable thought given to the matter of recruiting procedures and practices as well as the questionable pressures and intentions expressed or exercised by several companies recruiting on campuses. It is quite apparent that there is a growing distaste for some of the practices, not only from representatives of colleges but from industrial representatives as well.

"Other regional placement groups have made specific recommendations for changes in the Code of Ethics adopted in 1947 by the American Society for Engineering Education. The recommendation quoted above did not deal with mechanics since the Committee believed that all regional groups should participate in the framing of the new Code. In this way a uniform practice, nationwide, could be adopted.

"The Executive Committee under Philip J. Brockway, President, will be able to name representatives of E.C.P.O. to join all other regional groups to prepare such a document. Although such preparation cannot have an accepted Code prepared before next year, it does appear that the cooperation of all regional groups is necessary if any Code is to be enforced.

"It is reassuring," Mr. Cameron concluded, "to learn of the

sentiments of the industrial group deplored some of the practices developed this past year. The hope was also expressed that few companies would so flagrantly abuse recruiting practices as had been done in a few instances this past spring."

MCPA Revised Code of Ethical Practices

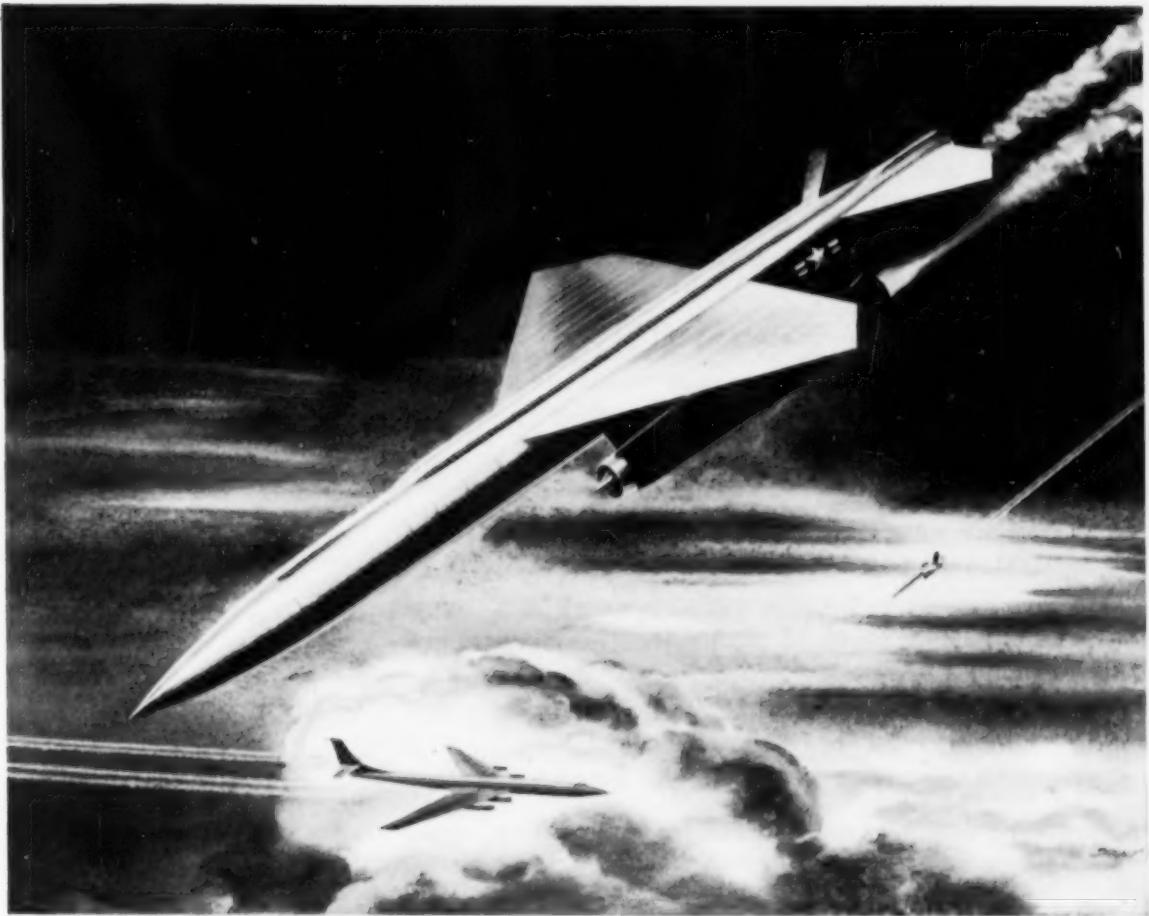
RESPONSIBILITY OF EMPLOYER

1. It shall be the responsibility of the employer to contact the colleges early enough so that the schools can plan to take care of those organizations who wish to interview their students. Due to the limited number of companies that can be handled at one time on the campus, it is necessary to carefully schedule arrivals and interviews. In the original request for interview dates it is imperative that indication be made of the number of separate interview schedules desired.

2. At the conclusion of the interview the student should be informed by the interviewer what the exact next step will be or that there is no mutual interest.

3. All organizations should give the students ample time to objectively consider the employment offer before requiring a final answer.

4. The employer should provide written material which will give the student a real picture of the company, such as the "company information sheet" or similar material preparing the student for the interview. This information should be supplied to the placement office in adequate quantity. The student should be clearly informed by the employer if he will be expected to take psychological, aptitude, or other tests before being accepted for a job. Other clarification should include reference to the signing of patent agreements, passing of physical examinations, and other incidents to final acceptance.



Boeing research produces a new defense weapons system

Boeing's BOMARC IM-99 is a long-range guided missile designed to strike enemy bombers while still over areas away from vital targets. It's a supersonic spearhead of an entire defense weapons system that includes communications, bases, logistics.

Engineers and scientists of all types contributed to the research that produced this vital weapons system. And they are continuing their contributions, not only to BOMARC, but to other significant advanced projects. Boeing engineers are coming up with solutions that will give direction to developments of the future. If this kind of pioneering appeals to you, and if you enjoy working with engineers of outstanding professional stature, you'll like Boeing.

And you'll find plenty of room for advancement. Boeing's growth — a 400%

jump in the number of Boeing engineers in the last 10 years — assures openings ahead, and job stability. Boeing promotes from within, and every six months a merit review gives each engineer a personal opportunity for recognition, advancement, increased income.

Starting salaries at Boeing are high. If you are interested in continuing graduate studies, Boeing will arrange a special work schedule for you and pay all tuition and fees.

Other Boeing advantages include a liberal retirement program and the backing of outstanding research and test facilities.

You will enjoy life in any of the three young spirited communities in which Boeing is located. Pick the climate and living advantages that suit you best. Each offers an abundance of recreational

activities, plus good housing, schools, convenient shopping centers.

You'll be proud to be associated with a leader in one of the most exciting—and promising—industries in the country. Why not find out how Boeing can help you get ahead in your engineering career?

*For further Boeing career information
consult your Placement Office or write:*

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Boeing Airplane Company, Seattle 24, Wash.

F. B. WALLACE, Staff Engineer — Personnel
Boeing Airplane Company, Wichita, Kansas

A. J. BERRYMAN — Admin. Engineer
Boeing Airplane Company, Melbourne, Florida

BOEING
Aviation leadership since 1916
Seattle, Washington Wichita, Kansas Melbourne, Florida

5. The employer should inform the placement officer of broad categories of employment possibilities and the particular degrees desired.

6. The employer has, as part of the over-all educational plan, the responsibility of guidance and assistance to students. It is therefore recommended that interviews be conducted regularly, year after year.

7. Dates suggested by the employer for plant visits should be flexible so as to cause the least interference with classroom schedules. The invitation to visit the employer's plant should indicate what expenses the company will pay and how and when reimbursement will be made. (Many students borrow money to make these trips.) If

more than one company is visited during the same trip the expenses should be pro-rated. Elaborate entertainment and other over-selling techniques should be avoided.

8. Placement offices should receive carbon copies of all correspondence with students and faculty members.

9. The employer should recognize the necessity of punctuality. He should advise the placement office or faculty of his expected arrival time, arrive as agreed, and maintain his interviewing schedule. The practice of requesting psychological and other testing services by the placement office should be discouraged.

10. It is recommended prac-

tice to have not more than two representatives for each interview schedule. One is preferred.

11. An employer who desires to contact a particular individual at the time of his interviewing visit should write that individual with a copy to the placement office at least two weeks in advance.

12. An employer should not offer a student any special payment or salary arrangement which is not already a part of his company's salary program. Gifts, bonuses, and other inducements for which the student has not worked are basically wrong. Any attempt to hurry the student's decision beyond normal reasonable limits or to benefit a third party due to relationships with the student is wrong.

MCPA Research Fund

■ Adopted in final form by the Midwest College Placement Association at its meeting in Cleveland on September 12, a research fund has been established with the following provisions:

The objective is to stimulate or facilitate research in the college recruiting and placement field which would add to the knowledge, techniques, or general information of all parties concerned with the proper placement of college graduates. The fund will provide assistance as long as funds permit up to a maximum of \$1,000 per fiscal year. This fund will be awarded for one year and is renewable at the end of one year at the discretion of the MCPA designated authorities. This fund should not be considered a part of the MCPA annual contribution to the Journal of College Placement.

Candidates applying for fund assistance should be members, or on the staff of members, of the Midwest College Placement Association. They should be currently engaged in, or seriously contemplating research study into the field of placement that would benefit all members of the Midwest College Placement Association. Results of such research may be published in the Journal of College Placement under the sponsorship of the MCPA. There shall be no limitations regarding previous academic background; however, it would be desirable for the recipient to be pursuing graduate work in a recognized university.

Interested candidates will apply in quadruplicate by

submitting a written statement of the topic, and an outline of their proposed study, estimated cost, value or results expected, and similar data to the vice president of the Midwest College Placement Association. The deadline for each year's application will be June 15 of each year (to allow the Committee to act on applications and announce results at the annual meeting).

Applications will be brought before the Standing Committee on Research and Publication by the vice president, and final selection of the fund's recipient shall be made by this group. Said fund may be divided into various amounts, not to exceed a cumulative total of \$1000 and can be appropriated for the support of one or more research projects at the discretion of the research and publicity committee. The Standing Committee will have members serving three-year terms, with the vice president and the editor of the Newsletter as ex-officio members.

The vice president shall inform the person whose application has been approved, shall authorize payment by the treasurer of the MCPA and shall follow through to determine that all requirements have been fulfilled. A written report will be required by the fund's recipient. The findings shall be submitted to the vice president, who shall be responsible for informing the MCPA members. Publicity outside the MCPA shall be determined by the Executive Committee, depending upon the nature of the study made and the report regarding results obtained.



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Refer Applicants to R. C. Schulke, Uarco Incorporated, 141 West Jackson Boulevard, Chicago, 4, Illinois. Applicants Are Requested to Submit Full Particulars of Education and Experience.

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EATNA LIFE AFFILIATED INSURANCE COMPANIES:

Eatna Casualty and Surety Company, 151 Farmington Ave., Hartford, Conn. Austin D. Bryan, Secretary, Agency Department. Training program for salaried Field Representatives, sales promotional work in property and casualty insurance eventually leading to supervisory and management positions.

Eatna Casualty & Surety Company, (Fire Insurance Division), 30 Trinity St., Hartford, Conn. J. F. Dissell, Secretary. Training programs for Field representatives in property insurance.

* Eatna Life Affiliated Insurance Companies, 151 Farmington Ave., Hartford, Conn. John E. Mixer, Recruiting Co-ordinator. New England, New York, Pennsylvania. Administrative Training Program, Actuarial Students, Personnel Job and Time Study Analysts, IBM Supervisory Trainees, Group Division Trainees, Retirement Plan Specialists. All Home Office.

Eatna Life Insurance Company, 151 Farmington Ave., Hartford, Conn. Donald W. Crowther, Assistant Secretary, Group Division. Persons selected are trained as Group Home Office Representatives with advancement possibilities to supervision of our Group Insurance business in a given territory. Nationwide placement.

Eatna Life Insurance Company, 151 Farmington Ave., Hartford, Conn. Edwin Snow, Director of Agencies. Sales Management Trainees are selected to be trained for advancement in life insurance field sales management. Placement is nationwide.

AIRCRAFT ARMAMENTS, INC. Cockeysville, Md. Research, development, and manufacture of armament systems, radar, test equipment, missiles, trainers and simulators, ordnance, and armored vehicles. D. J. Wishart, Director of Personnel. East and South. Training program—applied engineering on the job. Summer employment.

The annual listing of

Recruiting Companies

in the United States for 1956-57

Data include the name of the firm, its status if a subsidiary, the names of individuals to be contacted for employment, the areas of recruitment if other than the entire United States, the nature of training programs, and the availability of summer foreign employment.

* Asterisk before name indicates that women as well as men will be employed.

ALLIS-CHALMERS MANUFACTURING COMPANY, Box 512, Milwaukee 1, Wis. Heavy machinery and farm equipment manufacturer. C. M. Rawles, Supervisor, Graduate Recruitment. Training programs in design, research, application engineering, manufacturing, field sales, development, and factory or field service. Summer employment for juniors.

ALUMINUM COMPANY OF AMERICA, 1501 Alcoa Building, Pittsburgh 19, Pa. Producer and Fabricator of Aluminum. R. L. Gaugler, Manager of College Recruitment. Positions in Electrical Engineering, Mechanical Engineering, Metallurgical Engineering, Design Engineering, Construction Engineering, Plant Engineering, Production Engineering, Sales, Research, and Accounting. Training program in Industrial Sales, Sales Administration, Sales Development, and Accounting. Summer employment.

ALUMINUM GOODS MANUFACTURING COMPANY, Manitowoc, Wis. Manufacturer of aluminum cooking utensils. John W. Ruedebush, Director of Industrial Relations.

Training programs in sales, engineering, and production.

AMERICA FORE INSURANCE GROUP, 80 Maiden Lane, New York 38, N.Y. All forms of fire and casualty insurance. Robert H. Potter, Personnel Superintendent. Western area—George M. Bowlus, Personnel Manager, America Fore Insurance Group, 135 South LaSalle St., Chicago 3, Ill. Two year training program for Liberal Arts graduates leading to Underwriting and Field Representative positions.

AMERICAN BRAKE SHOE COMPANY, 230 Park Ave., New York 17, N.Y. Eleven divisions manufacturing ferrous and non-ferrous castings, forgings, hydraulic components, brake lining materials, and varied railroad products. Robert B. Parker, Assistant to the President, Personnel. Training programs in production, sales, and engineering.

* AMERICAN CAN COMPANY, 100 Park Ave., New York 17, N.Y. Arnold F. Campo, Supervisor of Training. Training programs in Manufacturing, Engineering, Sales, Accounting, Research and Techni-

cal Service, Purchasing and Industrial Relations.

*AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N.Y. Chemicals. Alexander Clark, Coordinator of College Relations. East of Mississippi.

AMERICAN GAS AND ELECTRIC COMPANY SYSTEM. Electric utility serving area extending from Southern Michigan to the North Carolina border. The principal companies are:

American Gas & Electric Service Corp., 30 Church Street, New York 8, N.Y. R. N. Hurt, Supervisor of Employee Relations.
Appalachian Electric Power Co., 40 Franklin Rd., Roanoke, Va., J. A. Mundy, Employee Relations Supervisor.

Indiana & Michigan Electric Co., 2101 Spy Run Ave., Fort Wayne, Ind., R. D. Saffen, Employee Relations Supervisor.

Ohio Power Co., 301 Cleveland Ave., S. W., Canton Ohio. J. H. Edwards, Employee Relations Supervisor.

Interviewing for Civil, Electrical, and Mechanical Engineers. Rotational Indoctrination Program. Summer employment.

AMERICAN INSURANCE COMPANY, 15 Washington St., Newark, N.J. Property and casualty insurance company. John J. Leddy, Assistant Secretary, Newark, N.J.; Raymond Holvenstot, Personnel Manager, 304 North Main St., Rockford, Ill.; William B. Miller, Vice President, 333 Middlefield

Rd., Menlo Park, Cal. Training program in underwriting, adjusting, and sales promotion. No direct sales.

*AMERICAN MUTUAL LIABILITY INSURANCE COMPANY (Nationwide) 142 Berkeley St., Boston 17, Mass. Casualty and fire insurance. G. H. Carruth, Technical Recruitment Director. Training programs: sales, claim adjustment, safety and loss prevention, insurance underwriting and administrative (accounting and finance, actuarial science, methods and systems, other.)

*AMERICAN NATIONAL RED CROSS, 18th & D Sts., N.W., Washington 13, D.C. A national service organization with programs in Nursing, Safety, Disaster, Blood, and Junior Red Cross services and in welfare and recreation service to men and women of our Armed Forces. Norman A. Durfee, National Director, Personnel Services. Operating Offices: Earle H. Herbert, Director, Personnel, Eastern Area, 615 No. St. Asaph St., Alexandria, Va.; Ardon L. Cole, Director, Personnel, South-eastern Area, 1955 Monroe Dr. N.E. Atlanta 9, Ga.; Miss Elizabeth Bruce, Director, Personnel, Midwestern Area, 4050 Lindell Blvd., St. Louis 8, Mo.; J. Gilmore Marquis, Director, Personnel, Pacific Area, 1550 Sutter St., San Francisco, Cal. In-service training programs. Foreign employment for those assigned with military.

THE AMERICAN SUGAR REFINING COMPANY, 120 Wall St., New York 5, N.Y. Thomas V. McCabe, Recruiting Division. East, Middle, West, and South. Training programs in accounting, engineering, and sales. Summer employment.

*AMERICAN VISCOSA CORPORATION, 1617 Pennsylvania Blvd., Philadelphia 3, Pa. Manufacturer of man-made fibers, films, plastics, cellophane, and textile chemicals. B. B. Bright, Director, Recruitment and College Relations, East, South, Mid-West, South-West. On-the-job training. Summer employment.

N.Y.U. Checks Factors Determining Promotions

As a part of a 10-year study of City College of New York chemical engineering graduates concerning employment progress, alumni from the classes of 1946-55 were asked, "What factors do you feel are most important in determining promotion and salary increase?" According to John R. Bonforte, Placement Director, the following information was received:

(230 alumni answered the question and 24 did not. Three spaces were provided for responses but most cited from two to six factors.)

FACTORS	FREQUENCY MENTIONED
Getting along with others above and below, social acceptability	105 times
Technical proficiency and knowledge	105 times
Enthusiasm, interest and attitude	55 times
Ability to handle added responsibility	36 times
Leadership and ability to supervise	29 times
Quantity of work production	28 times
Communication skills, speech, writing	27 times
Company growth and expansion	26 times
Initiative	25 times
Dependability and application to job	22 times
Advanced training and education	19 times
Creative ability, originality, imagination	19 times
Luck — being in right place at right time	19 times
The following factors were mentioned, as indicated in parentheses.	
perseverance and follow thru (16)	ability to sell
self confidence (16)	one's ideas (13)
ability to apply knowledge (15)	aggressiveness (11)
quality of work (15)	analytic ability (11)
years of experience and seniority (13)	personal contacts (10)

Note: 58 Alumni coupled technical proficiency and knowledge with social acceptability and getting along with others.

"How do you make ribbons out of rock?"



This question was actually asked by a little girl at a recent display of 3M products in New Jersey.

The little girl was understandably confused—she was confronted by a bewildering range of products—among the most diversified in U. S. industry today.

True, we do make "Sasheen," one of the largest selling brands of colored gift wrap ribbon. We also make roofing granules derived from rock quarries in Wausau, Wisconsin, Little Rock, Arkansas and Corona, California. In between the ribbons and the rocks are a whole catalog of 3M products: "SCOTCH" Brand Pressure-Sensitive Tapes; "SCOTCH" Magnetic Recording Tape; "SCOTCHLITE" Reflective Sheeting, 3M Brand Photo-Offset Plates; "Thermo-Fax" Brand Copying Machines and Copying Paper; "3M" Brand Fluorochemicals; "3M" Brand Abrasive Products; and even some new developments we haven't as yet named. The new products cover the field from textiles to jet propulsion. But so far, we haven't found a way to make ribbons out of rocks.

Needless to say, this big diversification of products and interests all within one company spells out big opportunities. We have worthwhile openings right now in many divisions of our technical, research, sales, and staff management activities. For college graduates who are interested in going with a successful company that is still growing, these opportunities can be most attractive.

We'll be glad to send specific information on request.

**Minnesota Mining
and Manufacturing Co.**

St. Paul 6, Minnesota



*ANCHOR HOCKING GLASS CORPORATION, Drawer 405, Lancaster, Ohio. Glass tableware, metal, and molded closures, glass containers, and capping machines. Don J. Garber, Supervisor of Personnel Procurement. Midwest and East. Training program in engineering, industrial management, sales, and accounting. Summer employment.

ANDERSON, ARTHUR & CO., accountants and auditors. Home Office 120 South LaSalle St., Chicago 3, Ill. Richard S. Claire, Partner in Charge of Personnel and Training. Applicants should address inquiries to Mr. Claire or to Partner in Charge of the office in the city nearest their schools. Training programs centralized training schools in Chicago for three weeks in August of each year for all new men; on-the-job training programs continuously throughout the year in all offices.
Atlanta 3, Ga., William-Oliver Bldg., William J. Nettles.
Boston 8, Mass., 294 Washington

St., Walter J. Oliphant.
Chicago 3, Ill., 120 South LaSalle St., Donald Erickson.
Cleveland 14, Ohio, 500 National City Bank Bldg., Marvin Johnson.
Dallas 1, Tex., 720 Corrigan Tower, Robert Zech.
Denver 2, Colo., 1700 Broadway, A. Bruce Matthews.
Detroit 26, Mich., 2646 Penobscot Bldg., Mark D. Littler.
Houston 2, Tex., 607 Esperson Bldg., Joe D. Beasley.
Kansas City 5, Mo., 21 West 10th St., Donald M. Gamet.
Los Angeles 17, Cal., 612 South Flower St., James A. Campbell.
Mexico City, Mex., Paseo de la Reforma, 76, John H. Lumpkin.
Milwaukee 3, Wis., 231 West Wisconsin Ave., Herbert D. Soper.
Minneapolis 2, Minn., 920 Northwestern Bank Bldg., A. R. Nelson.
New York 4, N.Y., 67 Broad St., George Wagner.
Omaha 2, Neb., 216 Aquila Court, John M. Waters.
Philadelphia 3, Pa., 117 South 17th St., Marion F. Stone.

St. Louis 1, Mo., 1755 Railway Exchange Bldg., L. Wayne Lutyens.

San Francisco 8, Cal., 600 California St., Renick H. Buckles.
San Juan, P. R., 1600 Ponce de Leon Ave., Frank Denier.
Seattle 4, Wash., 1410 Dexter Horton Bldg., Edward J. Fox.
Washington 5, D.C., 777 14th St., N.W., M. Everett Parkinson.

*ARCHER-DANIELS-MIDLAND COMPANY, 700 Investors Bldg. Minneapolis, Minn. Processors of agricultural products. Loren L. Law, Employment Manager. Middle West and East. Training programs in research, production, engineering, sales (technical and non-technical), milling, grain merchandising, and business administration. Summer employment.

*ARMA DIVISION, American Bosch Arma Corporation, Garden City, N.Y. Conducts research, development, and manufacturing of precision electro-mechanical and electronic control systems and instrumentation. Charles S. Fernow, Administrator of Technical Education. Rotation training program offered for recent graduates in mechanical engineering, electrical engineering, and engineering physics.

ARMCO STEEL CORPORATION, Middletown, Ohio. Integrated producer of special-purpose steels. Rowan F. Crawford, Staff Supervisor of Employment. East and Midwest. Training programs in sales engineering, industrial engineering, plant metallurgy, plant engineering and operations, research-development, fabricating operations. Summer employment. Also:

Armco Drainage & Metal Products, Inc. Fabrication of highway and drainage products.

Armco International Corporation. Foreign distribution of steels and related products, overseas fabrication of steel drainage products.

ARMSTRONG CORK COMPANY, Lancaster, Pa. Resilient flooring, building materials, glass and closure products, industrial speci-

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alties, and high and low temperature insulating products. W. J. VanPelt, Assistant Manager of Employment and College Relations. Formal training provided for all areas of employment. Research and development training programs optional. Summer employment.

GUY F. ATKINSON COMPANY, 10 West Orange Ave., South San Francisco, Cal. General contractor of the heavy construction industry. James A. Ferren, Employment Manager. West Coast. Training primarily through assignment rotation program.

***THE ATLANTIC REFINING COMPANY**, 260 South Broad St., Philadelphia 1, Pa. Crude oil production, petroleum refining, marketing, and transportation. H. M. Overley, Personnel Supervisor—Engineering, Accounting, and Secretarial Personnel; G. A. MacFarland, Asst. Director—Sales Personnel, Marketing and Sales Operations; R. A. Jones, Personnel Supervisor, 3144 Passayunk Avenue, Philadelphia—Research & Development and Manufacturing Departments; G. O. Wheeler, Box 2819, Dallas, Texas—Southwestern United States Crude Oil Production and Research. Summer employment.

***ATOMICS INTERNATIONAL** (Division of North American Aviation, Inc.) 21600 Vanowen St., Canoga Park, Cal. Research, development, and manufacture of nuclear energy reactors for power, research, industry, and medicine. Ralph A. Hawley, College Relations Representative. Training on basis of individual requirements.

AUTOMATIC ELECTRIC COMPANY. (Manufacturing Subsidiary of General Telephone Corp.) 1033 W. Van Buren St., Chicago 7, Ill. Manufacturer of telephone equipment as well as switches and relays for industrial use. Donald E. Rons, Personnel Manager. Middle West. Training program for Electrical, Industrial, and Mechanical Engineers. Summer employment.

***AUTONETICS** (Division of North American Aviation, Inc.) 12214

Lakewood Blvd., Downey, Cal. Inertial Guidance, Fire and Flight control and special electronic and electro-mechanical systems. John J. Kimbark, College Relations Representative. Training on basis of individual requirements.

***AVION DIVISION**, ACF Industries, Inc., 11 Park Place, Paramus, N.J. Research and development of electronic, electro-mechanical industry for aircraft fire control and navigational systems as well as electronic guidance missile systems. Contact A. C. Peck for interview. New England, Mid-West, Middle Atlantic, and Southern states. Summer employment.

BABCOCK & WILCOX COMPANY, THE, 161 E. 42nd St., New York 17, N.Y. Research, designing, manufacturing, selling, erecting, servicing steam generators, atomic energy equipment, process equipment; tubing and refractories. J. W. Andeen, Manager of Student Training Dept. Company-wide training program. Summer employment.

***BAKELITE COMPANY** (Division of Union Carbide and Carbon Corporation) Various locations throughout the United States. Manufacture and compounding of plastic materials. James C. Older, Coordinator of Technical Recruiting, Bound Brook, New Jersey. All men hired for sales, production, and general engineering are placed in a training program, which, through on-job training, observation, and discussion gives them a complete picture of our operations.

J. T. BAKER COMPANY, Phillipsburg, N.J. Manufacturing and sales of fine industrial chemicals. George P. Fleagle, Personnel Manager. Development programs for management careers in accounting-finance, engineering-production, sales, and scientific research and development. Special summer training programs.

BANKERS LIFE COMPANY, 711 High St., Des Moines, Iowa. Life, accident and sickness, and group lines of insurance including pension plans. George A. Harper,

Assistant Vice President, Middle West for Home Office career positions. Training program.

***BATTELLE MEMORIAL INSTITUTE**, 505 King Ave., Columbus 1, Ohio. Industrial and scientific research. Russell S. Drum, Personnel Manager. East, Middle West, and South. Informal, on-the-job training for engineering and scientific personnel. Planned summer employment program.

***BAUMANN, FINNEY & CO.**, 208 South LaSalle St., Chicago 4, Ill. Certified Public Accountants. Norman D. Curtis, Personnel Director. Middle West. Training programs in accounting and auditing.

***BELL AIRCRAFT CORPORATION**, Post Office Box 1, Buffalo 5, N.Y. Design and development of advanced guided missiles, research aircraft, rocket motors, inertial guidance systems, airborne electronic equipment. George E. Klock, Chief, Personnel Operations. On-the-job and rotational training program. Summer employment program.

BELL TELEPHONE COMPANIES. Telephone and other communications services, networks, and facilities. Training programs all departments. Summer employment.

Each company is responsible for Bell System relations with colleges and universities in its territory. Each coordinates recruiting activities for all Bell System units and refers applicants to the company of their choice.

Other Bell System units which are national in scope are listed separately in the general alphabetical list. Their recruiting activities are coordinated with those of the telephone companies. They are:

- ***Long Lines Dept.**, A.T.&T. Co.
- ***Bell Telephone Laboratories** Western Electric Company.
- ***Sandia Corp.** (operated by Western Electric Co. for Atomic Energy Commission).
- Telephone company addresses and their territories are:
- ***Bell Telephone Co. of Pennsylvania**, 1835 Arch St., Philadelphia

- 3, Pa. Official 3-0050. J. E. Murphy, Gen. Pers. Supr.-Del., Pa.
- *Chesapeake & Potomac Telephone Cos., 725 13th St., N.W., Washington 5, D.C. METropolitan 7-9900. W. J. Carto, Gen. Pers. Supr.- Dist. of Col., Md., Va., W.Va.
- *Cincinnati & Suburban Bell Telephone Co., 225 E. 4th St., Cincinnati 2, Ohio. EXchange 6-9900. C. D. Coy, Gen. Pers. Mgr.
- *Illinois Bell Telephone Co., 212 W. Washington St., Chicago 6, Ill. Official 3-9300. R. B. Plain, Coll. Empl. Supr.
- *Indiana Bell Telephone Co., 240 N. Meridian St., Indianapolis 9, Ind. MElrose 5-9811. R. M. Loomis, Asst. Vice Pres. Pers.
- *Michigan Bell Telephone Co., 232 West Grand River, Detroit 26, Mich. WOODward 3-9900. K. A. Newman, Supr., Gen. Pers. Activ.
- *Mountain States Telephone & Telegraph Co., 931 14th St., Denver 2, Colo. TABor 5-4171. K. B. Curtis, Comm'l. Pers. Mgr.-Ariz., Colo., Idaho, Mont., N.M., Utah, Wyo.
- *New England Telephone & Telegraph Co., 185 Franklin St., Boston 7, Mass. SHerwin 3-9800. W. R. Dangelmayer, Gen. Empl. Mgr.-Me., Mass., N.H., R.I., Vt.
- *New Jersey Bell Telephone Co., 540 Broad St., Newark 1, N.J. MItchell 9-9900. W. S. Weeks, Pers. Rel. Supr.
- *New York Telephone Co., 140 West St., New York 7, N.Y. EXchange 4-4600. George Elder, Coll. Empl. Coord.
- *Northwestern Bell Telephone Co., 118 S. 19th St., Omaha 2, Neb. ATLantic 6000. C. E. Dokken, Gen. Empl. Supr.-Ia., Minn., Neb., N.D., S.D.
- *Ohio Bell Telephone Co., 750 Huron Rd., Cleveland 15, Ohio. MAin 2-9900. E. P. Pritchard, Pers. Asst.
- *Pacific Telephone & Telegraph Co., 140 New Montgomery St., San Francisco 5, Cal., GARfield

1-9000. J. M. Edwards, Asst. Vice Pres.-Cal., Nev., Ore., Wash.

*Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta 1, Ga. MURray 5-8600. I. W. Carmack, Gen. Empl. Mgr.-Ala., Fla., Ga., Ky., La., Miss., N.C., S.C., Tenn.

*Southern New England Telephone Co., 227 Church St., New Haven 6, Conn. MAin 4-9221. B. H. Jose, Asst. Vice Pres.-Conn.

*Southwestern Bell Telephone Co., 1010 Pine St., St. Louis 1, Mo. CHEstnut 1-9800. M. Cleaver, Pers. Supr.-Ark., Kan., Mo., Okla., Texas.

*Wisconsin Telephone Co., 722 No. Broadway, Milwaukee 2, Wis. EXchange 3-9300. R. S. Jerde, Gen. Pers. Rel. Supr.

*BELL TELEPHONE LABORATORIES, Inc., 463 West St., New York 14, N.Y. CHelsea 3-1000. Research, development, and design. R. A. Deller, Employment Director. Will recruit for engineers and scientists with B.S., M.S., or Ph.D. degrees in E.E., M.E., Engineering Mechanics, and Engineering Physics; Mathematics, Physics, Chemistry, and others at graduate level for technical work. Training in both E.E. and Law for Patent Work; Bus. Ad. and Economic majors for staff work. Will recruit nationally. New England and Mid-Atlantic for women. Special training programs. Summer employment.

BENDIX PRODUCTS DIVISION (Division of Bendix Aviation Corporation) 401 N. Bendix Drive, South Bend 20, Ind. Aircraft and automotive components. J. P. Makielski, Assistant Administrative Engineer. Training program in engineering.

BENDIX - WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY, 901 Cleveland St., Elyria, Ohio. H. J. Williams, Experimental Test Engineer. Central. On the job training in Engineering.

BETHLEHEM STEEL COMPANY, Bethlehem, Pa. A. M. Rupkey, Manager of Personnel. The Loop Course is a training program for all college graduate trainees.

BOEING AIRPLANE COMPANY. (Divisions: Seattle, Transport, Pilotless Aircraft, and Industrial Products, located in Seattle, Wash.; Wichita Division located in Wichita, Kansas. Test Centers at Melbourne, Fla., and Moses Lake, Wash.) Designers and builders of aircraft and missiles, gas turbine engines, etc. Don F. Renard, Manpower Procurement Coordinator, 1301 Second Ave., Seattle Wash.; or Mel Vobach, Employment Manager, 233 North Water St., Wichita, Kan. National Training programs for engineers, finance, production. On-the-job training with an orientation program. Summer employment.

BOSTON INSURANCE GROUP, 87 Kilby St., Boston 2, Mass. Fire, Marine, and Casualty Insurance. William H. Hornicek, Assistant Personnel Manager. New England and Eastern. Training Program for underwriters, claim adjusters, and special agents.

BROWN INSTRUMENTS DIVISION (Division of Minneapolis-Honeywell Regulator Company) Wayne and Windrim Aves., Philadelphia 44, Pa. Industrial Controls and Instrumentation. D. R. Garvey, Manager, Employment Division. Nationally. Training program in sales. Summer and foreign employment—under conditions.

BUCKY-ERIE COMPANY, South Milwaukee, Wis. J. R. Grieb, Manager of Procurement and Placement. Training programs in Industrial Engineering, Industrial Management, Sales.

BUDD COMPANY, THE, 2450 Hunting Park Ave., Phila. 32, Pa. Automobile stampings, railway passenger cars, jet engine components, nuclear systems, plastics. Harry L. Lauer, Jr., Assistant to the Personnel Manager. Eastern, Middle Atlantic, and Mid-West. Management training program for production, sales, purchasing, accounting, and general administrative departments. Summer employment (technical and research only).

BURROUGHS CORPORATION, 6071 Second Ave., Detroit 32, Mich. Manufacture and sale of electro-

mechanical business machines and electronic equipment. C. E. Scholl Director, Marketing Personnel Division. Training program in Sales. A. L. Suzio, Placement Coordinator. East, Midwest, and Southwest. Training programs in Electrical and Mechanical Engineering, Physics, and Mathematics.

CALIFORNIA BANK, 629 S. Spring St., Los Angeles 54, Cal. Commercial banking in metropolitan Los Angeles. James C. Ellsworth, Vice President. Western states. Training program in general bank management and in banking specialties. Summer employment.

***CALIFORNIA STATE PERSONNEL BOARD**, 801 Capitol Ave., Sacramento 14, Cal. C. Stewart Warner, Supervisor, Recruitment Unit. On-the-job training and merit promotion program for B.S. graduates in Civil Engineering for planning, design, construction of highways and bridges and hydraulic projects with Cal. Division of Highways and Dept. of Water Resources.

CALIFORNIA TEXAS OIL COMPANY, LTD., 380 Madison Ave., New York 17, N.Y. W. A. Goodyear, Assistant Manager-Organization Department. Mid-Atlantic Area, Middle West, and South West. Training programs in all major phases of integrated oil operation. Summer and foreign employment.

***CAMP FIRE GIRLS, INC.** (Department of Personnel and Training) 16 East 48th St., New York 17, N.Y. National youth-serving organization. Mrs. John McCalley, Director of Personnel and Training Department. Throughout the U.S. Basic training courses and professional workshops. Summer employment.

CANADAIR LIMITED, (a subsidiary of General Dynamics Corporation) P.O. Box 6087, Montreal, Quebec, Canada. Aircraft and guided missiles. Design and development of nuclear reactors. L. Wiebe, Engineering Services Supervisor.

CARBIDE AND CARBON CHEMICALS COMPANY (Division of Union Carbide and Carbon Corporation) 30

East 42nd St., New York, N.Y. Producers of basic organic chemicals. General Industrial Relations Department.

CARGILL, INCORPORATED, 200 Grain Exchange Bldg., Minneapolis, Minn. Grain Merchandising; Feed Manufacturing and Distribution; Vegetable Oil Processing and Refining; Producing and Distributing Hybrid Seed Corn; Barge and Boat Operations. Fred C. Nordstrom, Director of College Recruiting. General Training Program in Sales, Merchandising, and Production.

CARNATION COMPANY. Manufacturer and distributor of evaporated milk, dry milk solids, miscellaneous grocery products, dog food, farm feeds, breakfast cereals, fresh milk and ice cream and related products, frozen pies, and tin cans. Contact Personnel Department, Carnation Company, Los Angeles 36, Cal. Interviewing will be conducted at 56 U.S. and Canadian Colleges and in New York and Chicago by appointment. Fourteen training programs are provided in the general areas of sales, manufacturing, accounting-office management, engineering, food technology-chemistry, etc. Carnation operates internationally at 241 locations. (Assignments for U.S. nationals are restricted to this country).

CARRIER CORPORATION, 300 S. Geddes St., Syracuse, N.Y. Manufacturer of air conditioning, refrigeration, heating equipment, and related products. Richard T. Everill, Employment Manager, Technical Personnel. Training programs in research, product development, application, sales, service and construction, and manufacturing engineering. Summer and foreign employment.

***J. I. CASE COMPANY**, 700 State St., Racine, Wis. Manufacturers of farm machinery. Edward F. Hyland, Manpower Director. Training program in production, metallurgical control and development, engineering (industrial and product), accounting, and sales (domestic). Summer and foreign employment.

CATERPILLAR TRACTOR CO., Peoria, Ill. Builder of diesel engines, tractors, motor graders, earth-moving equipment. Norman M. Nelson, Employee Relations General Office. Training programs for graduates in engineering, accounting, and business. Summer and foreign employment.

CESSNA AIRCRAFT COMPANY, 5800 East Pawnee Rd., Wichita, Kan. John C. Harper, Personnel Representative. College Recruiting. On-the-job training program. Summer and foreign employment.

***CHEMSTRAND CORPORATION, THE**, Decatur, Ala. Manufacturers of synthetic fibers—Acrlan and Nylon. A. D. Preston, Technical Personnel Manager. East of the Rocky Mountains. Thorough training and indoctrination in plant operations and corporation activities. Summer employment.

CHICOOPEE MANUFACTURING CORPORATION (a Johnson & Johnson Company), 501 George St., New Brunswick, N.J. Textile-Cotton, Rayon, Lumite, Saran, Non-Woven Fabrics. Thomas F. Kehoe, Director of Selection and Training. East, New England, South, Mid-West. One year training—sales, accounting, production management. Summer Employment Possible — Accounting, Textile Engineers.

CHRYSLER CORPORATION. Automobiles, trucks, air conditioning & heating, defense products. L. M. McCormick-Goodhart, Supervisor of Management and College Recruiting, 2985 East Jefferson Ave., Detroit 7, Mich. (P.O. Box 2688). Training in sales, finance, engineering, and production.

CINCINNATI GAS & ELECTRIC COMPANY, THE, P.O. Box 960, Cincinnati 1, Ohio. Joseph E. Bell, Employment Manager. Middle West. Training programs in distribution, production, and general procedures. Summer employment.

COLGATE-PALMOLIVE COMPANY, 300 Park Ave., New York 22, N.Y. Manufacturer of synthetic detergents, soaps, and toilet articles. C. R. Ordal, Director of Organizational Planning. Training programs in Research and Develop-

ment (Jersey City, New Jersey); Sales, Finance and Accounting, Engineering, International Manufacturing, International Engineering, International Sales (New York City); Domestic Manufacturing (Jersey City, N.J.; Jeffersonville, Ind.; Kansas City, Kan.; Berkeley, Cal.)

COLUMBIA GAS SYSTEM, 120 East 41st St., New York 17, N.Y. Production, transmission, distribution, and storage of natural gas. David R. Edwards, Vice President. New York City, Charleston, W.Va., Pittsburgh, Pa., and Columbus, Ohio. Training program for Junior Engineers.

COLUMBIA-SOUTHERN CHEMICAL CORP. (Subsidiary of Pittsburgh Plate Glass Company), One Gateway Center, Pittsburgh 22, Pa. Manufacture and sale of organic and inorganic industrial chemicals. J. L. Samples, Assistant to the Vice President—Operations. Training program in sales and production. Summer employment.

COMBUSTION ENGINEERING, INC., 200 Madison Ave., New York 16, N.Y. Designers and fabricators of fuel burning, steam generating, and related equipment. Otto de Lorenzi, Director of Education and Fuels Consultant. Training programs for engineers in all phases of company operation.

COMMERCIAL SOLVENTS CORPORATION, Terra Haute, Ind. Manufacturing chemicals. W. N. McCutchan, Technical Recruitment. Mid-West and South. On-the-job training.

CONGOLFUM-NAIRN INC., 195 Belgrave Drive, Kearny, N.J. Manufacturer of smooth surface floor and wall coverings, floor wax, flooring adhesives, and specialty felt products. Warren F. Bietsch, Personnel Administrator. North Central and New England. Training programs for research, development, engineering, and sales personnel.

***CONNECTICUT GENERAL LIFE INSURANCE COMPANY**, 55 Elm St., Hartford 15, Conn. Stephen M. Garratt, Personnel Assistant. Eastern, Mid-Atlantic, Southern, Mid-West areas. Training pro-

grams in Home Office management and sales and sales management for Life, Accident, and Group Insurance and Group Pensions.

CONNECTICUT MUTUAL LIFE INSURANCE COMPANY, Hartford 15, Conn. Horace R. Smith, Superintendent of Agencies. Formal training programs in sales and sales management and Home Office actuarial work. Also on-the-job training for other Home Office administrative openings.

CONSUMERS POWER COMPANY, 212 West Michigan Ave., Jackson, Mich. Gas and electric utility. R. E. Beatty, Employment Supervisor. Mainly Middle West. On-the-job training. Summer employment for sophomore and junior engineering students.

CONTAINER CORPORATION OF AMERICA, 38 South Dearborn St., Chicago 3, Ill. National paperboard manufacturing company. Mrs. Constance M. Steele, Director of Personnel. Training programs in sales, production, and accounting.

CONTINENTAL CAN COMPANY, INC., 100 East 42nd St., New York 17, N.Y. All types metal, plastic, paper, fibre, and glass containers. Raymond L. Rawls, Director of Recruitment and College Relations. Technical Training Programs—Manufacturing; Design & Development; Research & Development; Production Engineering; Production Control; Quality Control; Industrial Engineering; Equipment Manufacturing. Non-Technical Training Programs—Sales; Accounting; Credit; Finance; Industrial Relations; Purchasing; Production Control; Quality Control; Production (Manufacturing).

CONTINENTAL OIL CO., Box 2197, Houston 1, Texas. R. R. Crow, Assistant Manager of Industrial Relations. Training programs in Chemical process engineering, oil production, marketing, land, geophysical, geological, pipeline engineering and management, research, petrochemical. Summer employment.

CONVAIR (Division of General Dynamics Corporation). Military and commercial aircraft and guided missiles. Research and development of nuclear powered aircraft. Training programs for graduates in engineering and allied sciences. Aeronautics Division—G. N. McMillan—Engineering Personnel Administrator. Convair, San Diego 12, Cal.

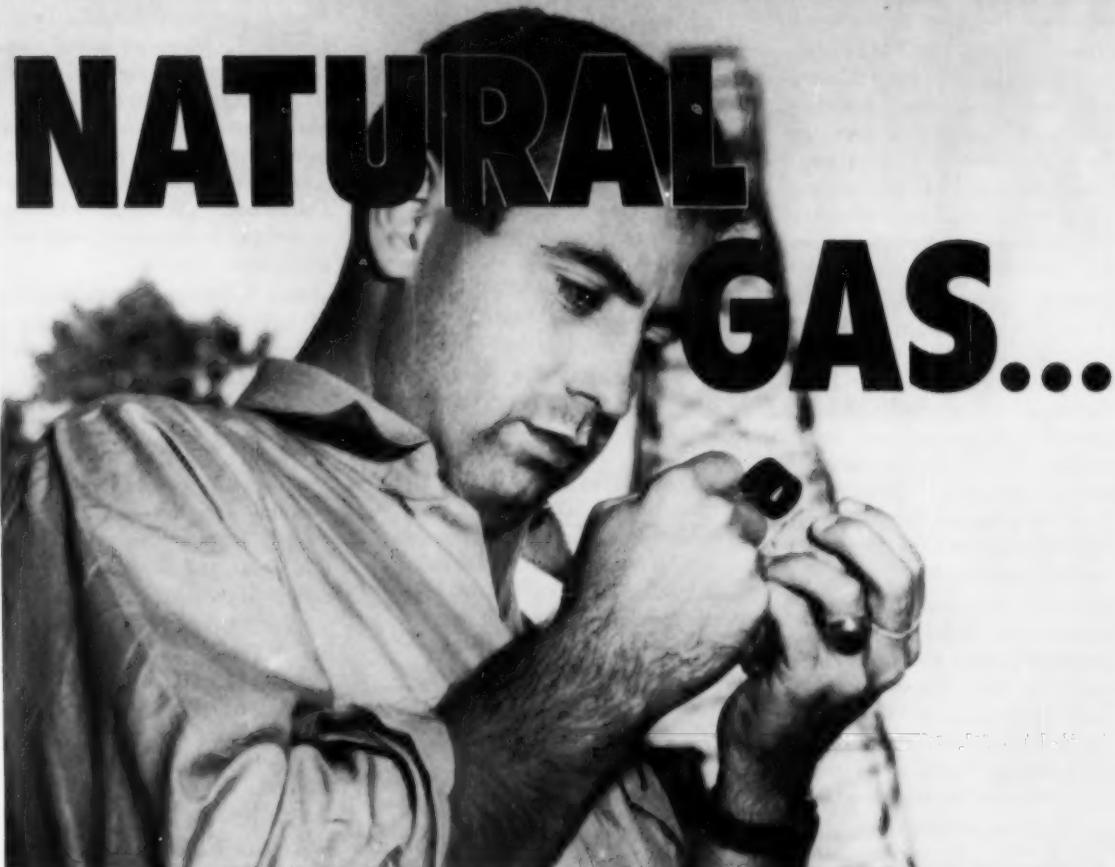
Ft. Worth Division—H. A. Bodley P.O. Box 748, Ft. Worth, Tex. Pomona Division—B. L. Nixon, Engineering Administrative Supervisor, P.O. Box 1011, Pomona, Cal.

San Diego Division—Henry Tracy Brooks, Administrative Supervisor, Engineering Dept., San Diego, 12, Cal.

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tists recruited. No formal training program as such.

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EAST OHIO GAS COMPANY, 1405 East 6th St., Cleveland 14, Ohio. Natural gas public utility. Lester G. Brailey, Personnel Director. Midwest. Training program in Industrial Sales, Engineering, Accounting.

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ELECTRO DYNAMIC (Division of General Dynamics Corporation) Bayonne, N.J. Industrial and marine electric motors of advanced design. Rene A. Vanina, Assistant Division Manager—Engineering.

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***EMPORIUM, THE**, 835 Market St., San Francisco 3, Cal. Retail Department Store. Helen E. Graham, General Personnel Manager. San Francisco Bay Area. Merchandising Training Program.

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FEDERATED MUTUAL INSURANCE COMPANY, 129 E. Broadway, Owatonna, Minn. Fire and Casualty Insurance. Harold C. McCarthy, Employment Manager. Minnesota, Wisconsin, Iowa, No. and So. Dakota. Training programs in Claims Adjusting, Fire Prevention and Safety Engineering, Auditing, and Underwriting.

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Ohio. Manufacturer of paper board and folding cartons. Daryl G. Severin, Assistant Coordinator of Personnel Development. East of the Mississippi River. Management training programs in engineering, sales, manufacturing, finance, industrial relations. Summer employment.

FUTURE COMPANY LISTINGS

Although every effort was made to advise all firms of known interest that this listing would be published, several failed to submit material. All companies not included are invited to inform the editors, in writing, of their intent to appear in subsequent annual JOURNAL listings.

GENERAL AMERICAN LIFE INSURANCE CO. 1501 Locust St., St. Louis 3, Mo. A. W. Evans, Director of Personnel. Midwest (Michigan to Texas). Five salaried career training programs—Sales and Sales Management, Agency Management, Field Investment Office Management, Home Office Administrative, and Actuarial.

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***GENERAL CHEMICAL DIVISION (of Allied Chemical and Dye Corporation)** 40 Rector St., New York 6, N.Y. Manufacture and sale of basic chemicals for industry, aerosol dispersants and refrigerants, reagent and fine chemicals. D. M. Holley, Manager of Personnel. Interviewing nation-wide and Canada. Training programs of varying types, primarily on-the-job, and patterned to individual in Technical Sales, Pure and Development Research, Plant production, Plant technical, Engineering. Summer and Canadian employment.

GENERAL DYNAMICS CORPORATION, 445 Park Ave., New York 22, N.Y. Carlton M. Barlow, Coordinator of Educational Programs. See also the following divisions: Canadair Limited, Convair Division, Electric Boat Division, Electro Dynamic Division, General Atomic Division, Stromberg-Carlson Division.

GENERAL ELECTRIC COMPANY. Training Programs and individual to contact as follows:

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Purchasing Agent, Control Chemist, Statistician

PILOT PLANT Chemist, Chemical Engineer

DEVELOPMENT Development Chemist, Engineer (Design, Chemical)

ENGINEERING Engineer (Design, Construction, Mechanical,
Electrical, Architectural)

MARKET ANALYSIS Market Researcher, Market Analyst, Merchandiser

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Plastics, Plastic Yarns, Textile Chemicals

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***GIRL SCOUTS OF THE U.S.A.**, 155 East 44th St., New York 17, N.Y. Administrative positions with adult volunteers in youth-serving organization. Mrs. S. B. Cortner, Director, Recruitment and Referral Division, Personnel Department. For New England contact Miss Gertrude McGill, 50 Beacon St., Boston, Mass. For Ohio, Kentucky, West Virginia contact Miss Virginia Edmonds, 12434

Cedar, Cleveland, Ohio. For Wisconsin, Michigan, Illinois, and Indiana contact Miss Charlotte Erb, 600 South Michigan, Chicago 5, Ill. On-the-job training.

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Eastern Division, R. R. Bowman,

Division Personnel Manager, Goodyear Tire & Rubber Company, 285 Madison Ave., New York, N.Y.

Central Division, R. H. Donaldson, Division Personnel Manager, Goodyear Tire & Rubber Company, 16501 Lorain Ave., Cleveland 11, Ohio.

Midwest Division, R. B. Hoehn, Division Personnel Manager, Goodyear Tire & Rubber Company, 850 Insurance Exchange Bldg., Des Moines, Iowa.

Southern Division, C. W. Meager, Division Personnel Manager, Goodyear Tire & Rubber Company, 2755 Piedmont Rd., N.E. Box 925, Atlanta, Ga.

Southwest Division, C. C. Bowser, Division Personnel Manager, Goodyear Tire & Rubber Company, 7301 Ambassador Row, Dallas, Texas.

Western Division, L. C. Buxton, Division Personnel Manager, Goodyear Tire & Rubber Company, Box 3339 Terminal Annex Station, Los Angeles, Cal.

GRANITE CITY STEEL COMPANY, 20th and Madison Ave., Granite City, Ill. Walter R. Klostermeier, Superintendent of Personnel and Training, Middle West. Training program in sales, production, and engineering. Summer employment.

GUARANTY TRUST COMPANY OF NEW YORK, 140 Broadway, New York 15, N.Y. John M. Keyes, Second Vice President. Atlantic Seaboard - North Carolina to Massachusetts and some in the Middle West. Trainees for credit-lending and for security analysis. Also corporate and personal trust administration.

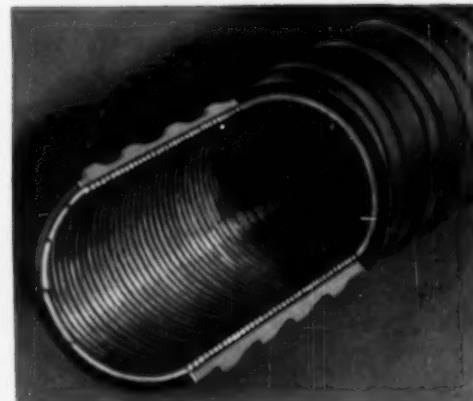
***HAGAN CHEMICALS AND CONTROLS, INC.** (Formerly Hagan Corporation) 323 Fourth Ave., Pittsburgh 22, Pa. Mechanical, Electrical, and Chemical Engineers, and Chemists. Ross C. Cibella, Personnel Manager. Formal and informal, on-the-job training program in Research and Development, and Technical Sales and Service. Program varies from three months to one year. Summer employment.

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Experimental waveguide, of tightly coiled copper wire in jacket, takes waves around bends. Solid wall pipe can be used for straight runs.

menting with a new kind of long distance transmission medium which consists of round waveguides—empty pipes—and is theoretically capable of carrying hundreds of thousands of telephone conversations simultaneously with hundreds of television programs.

A crucial difference between this new waveguide system and present systems is that the *higher* the frequency of the waves transmitted, the *less* the attenuation. This is exactly the reverse of what is true for other forms of long distance transmission, such as the coaxial cable. To explore at frequencies higher than any now used, Laboratories scientists are devising new techniques and apparatus. Thus, they have developed a new reflex klystron tube able to generate a wide band of frequencies near 60,000 megacycles per second.

This new waveguide system is another result of the Bell System's unending effort to anticipate America's future communications needs. Projects like this are typical of the challenges that offer absorbing careers to able, imaginative young engineers and scientists. Your placement officer has more information about careers with Bell Telephone Laboratories, and also with Bell Telephone Companies, Western Electric and Sandia Corporation.



One type of guide, designed to be flexible, is bent on wooden forms to study effect of curvature on transmission. Left is A. C. Beck, Radio Research Engineer, E.E., Rensselaer Polytechnic Institute. Right is A. P. King, Radio Research Engineer, A.B. in Physics and Engineering, California Institute of Technology.

BELL TELEPHONE SYSTEM



- HARNISCHFEGER CORPORATION**, 4400 W. National Ave., Milwaukee 46, Wis. Heavy Equipment Manufacturing. Wayne E. Busse, Assistant Personnel Director. Middle West. Training programs in sales, service, design, and industrial engineering. Summer and foreign employment.
- ***HARRIS TRUST AND SAVINGS BANK**, 115 West Monroe St., Chicago 90, Ill. Norman A. Corban, Assistant Personnel Officer. Training program in sales, administration, and operations in our Banking, Investment, and Trust Departments.
- ***HARVARD UNIVERSITY**, 1352 Massachusetts Ave., Cambridge 38, Mass. Miss Carolyn Thanisch, Head of Employment Section, Personnel Office. Eastern part of the United States. Will recruit secretaries, laboratory technicians, library assistants, computers with economics or mathematics and physics, and office assistants.
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- HAYNES STELLITE COMPANY** (Division of Union Carbide and Carbon Corporation) South Lindsay St., Kokomo, Ind. Lewis E. Denny, Industrial Relations Department. On-the-job training in Sales, Production, Applied Research, General Offices.
- H. J. HEINZ COMPANY**, P.O. Box 57, Pittsburgh 30, Pa. Variety Food Processors. R. C. Gerhard, Department Head - Employment. East, Middle Atlantic, Middle West. Will recruit Mechanical, Electrical, Chemical, and Industrial Engineers, Chemists, Business Administration, and Industrial Management majors.
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- HOOKER ELECTROCHEMICAL COMPANY** (and its Durez Plastics Division) Buffalo Ave. & 47th St., Niagara Falls, N.Y. Diversified organic chemicals and basic inorganics. Frank W. Dennis, Vice President in Charge of Industrial Relations. Openings in Chemical Engineering and Chemistry. Informal training program.
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- INGERSOLL-RAND CO.**, 11 Broadway, New York 4, N.Y. Machinery manufacturer. E. E. Breault, Technical Personnel Director. Training program for engineers in sales, production, engineering, and business. Summer and foreign employment.
- INSTITUTE OF GAS TECHNOLOGY** (Affiliated with Illinois Institute of Technology) Technology Center, Chicago 16, Ill. R. T. Ellington, Educational Program Chairman. Scholarships and fellowships for degrees in gas engineering. Summer employment.
- ***INSTITUTE OF PAPER CHEMISTRY**, THE, Box 498, Appleton, Wis. Graduate school and research center for the paper industry. Prospective students contact J. E. Todd; Staff, G. A. Graham. Four year graduate program leading to Ph.D. degree.
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- INTERNATIONAL HARVESTER COMPANY**, 180 N. Michigan Ave., Chicago 1, Ill. Manufacturers of motor trucks, construction equipment, farm tractors, farm implements, steel, fiber, and twine. F. D. MacDonald, Chairman of Manpower Committee. Training programs - Progressive Students (two years), Co-operative Students; on-the-job training in manufacturing, engineering, sales, etc. Summer employment for engineering students.
- INTERNATIONAL PAPER COMPANY**, (Southern Kraft Division), Mobile, Ala. Pulp and paper mills. Samuel W. Jenkins, Division Office. South and Southwest. On-the-job training programs for Chemical, Mechanical, Electrical, Civil, and Industrial Engineers; Chemists; and Accounting Majors. Summer employment for seniors.
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MONSANTO CHEMICAL COMPANY, Manufacturer of chemical, plastic, and petroleum products. Technical Personnel Manager, Monsanto Chemical Company, 1777 So. Second St., St. Louis 4, Mo. Summer employment.

MONTGOMERY WARD & COMPANY, 619 W. Chicago Ave., Chicago 7, Ill. Anthony D. Eastman, Vice President & Personnel Director. Training programs in Operating Supervision, Merchandising and Buying, Accounting and Auditing, Retail Store Management; as openings develop in Industrial Engineering, Law, Credit, Advertising, Traffic.

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NATIONAL CARBON COMPANY (Division of Union Carbide and Carbon Corporation) P. O. Box 6087, Cleveland 1, Ohio. S. W. Orne, Co-ordinator of Recruiting. On-the-job training for Research, Sales, Development, Works Engineering, Product and Process Control, Industrial Engineering.

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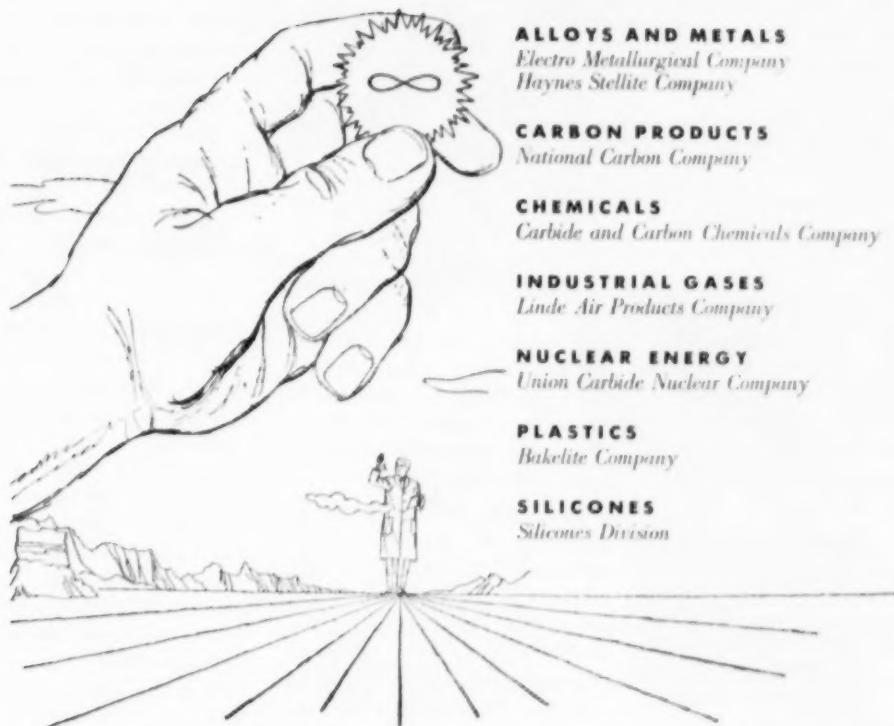
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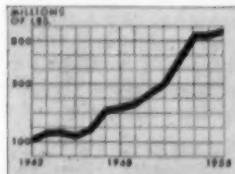


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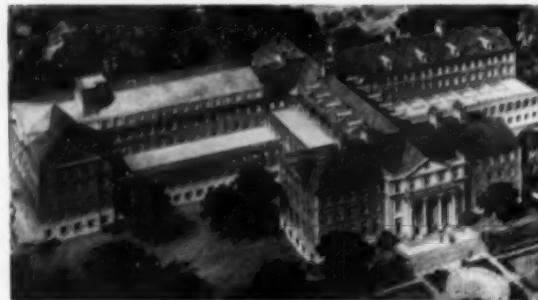
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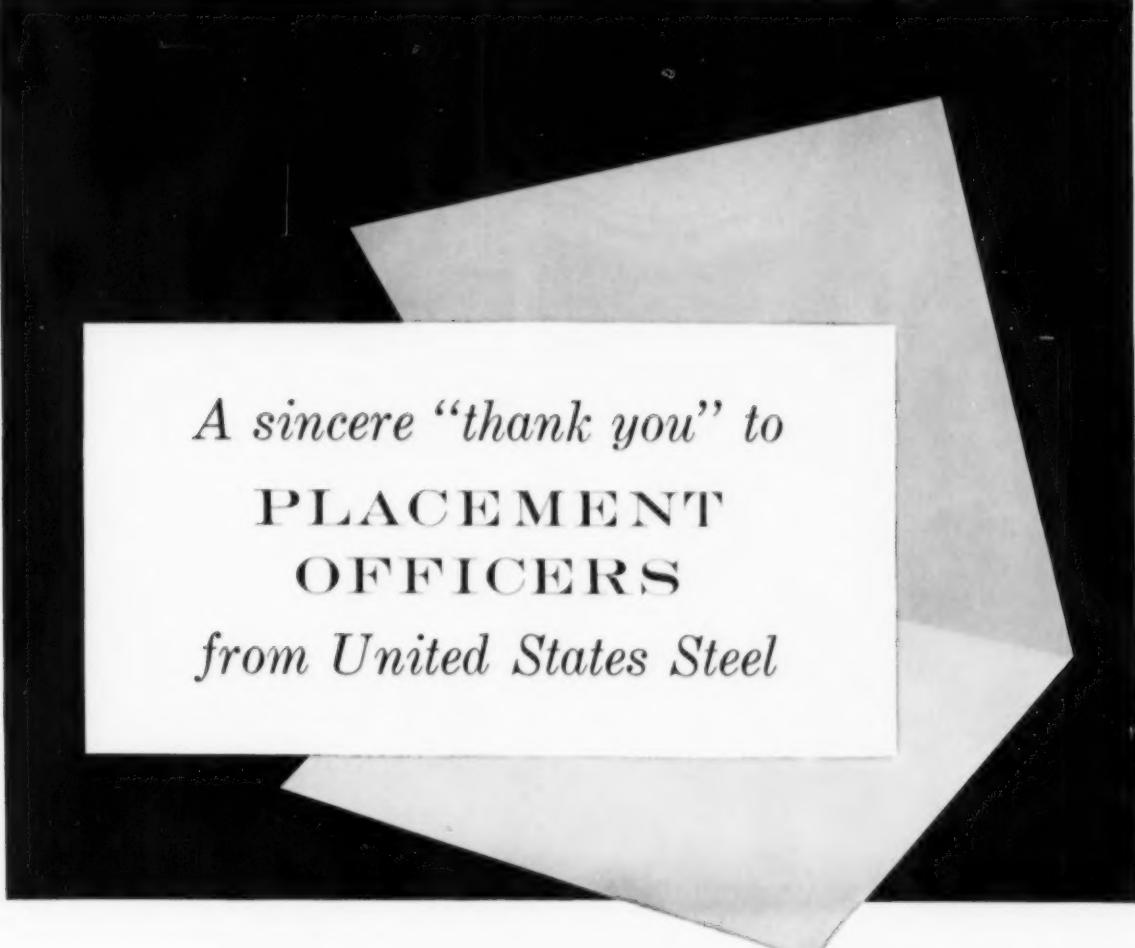
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